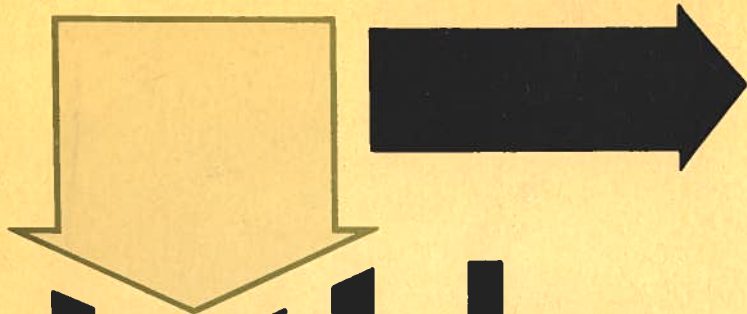
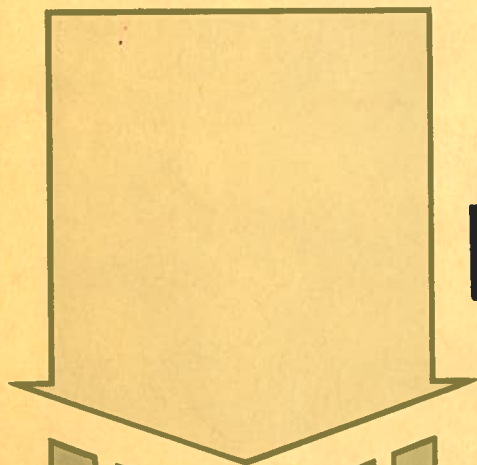
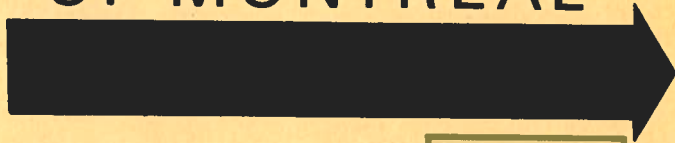


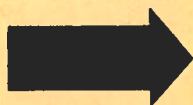
1971



OF MONTREAL



1971



72

Professor G. J. Webster

Loyola

OF MONTREAL



1971 - 1972

7141 SHERBROOKE ST. WEST

MONTREAL, TEL. 482-0320

GENERAL CALENDAR

ARTS COMMERCE ENGINEERING SCIENCE

Ad Maiorem Dei Gloriam

IT IS MY PRAYER THAT YOUR LOVE MAY GROW
 RICHER AND RICHER IN KNOWLEDGE AND
 PERFECT INSIGHT SO THAT YOU MAY HAVE A
 SENSE OF WHAT IS VITAL AND MAY BE MEN OF
 TRANSPARENT CHARACTER AND BLAMELESS LIFE.

St. Paul to Philippians 1, 9 & 10

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ACADEMIC CALENDAR 1971/1972

	1971 SEPTEMBER		Payment of Fees	Registration
<i>Tuesday</i>	7	Commerce IV, Engineering IV and Science IV students	9:00 A.M. 12:00 Noon	1:00 P.M. 4:00 P.M.
<i>Wednesday</i>	8	Arts IV students	9:00 A.M. 12:00 Noon	1:00 P.M. 4:00 P.M.
<i>Thursday</i>	9	University I students (all Faculties)	9:00 A.M. 12:00 Noon	1:00 P.M. 4:00 P.M.
<i>Friday</i>	10	Collegial II students (all Faculties)	9:00 A.M. 12:00 Noon	1:00 P.M. 4:00 P.M.
<i>Saturday</i>	11	Collegial I students (all Faculties)	9:00 A.M. 12:00 Noon	1:00 P.M. 4:00 P.M.
<i>Tuesday</i>	14	First term lectures begin. Late registration begins.		
<i>Friday</i>	17	Last day for late registration.		
<i>Thursday</i>	30	Last day for adding full courses and first term half courses.		
		OCTOBER		
<i>Monday</i>	11	Thanksgiving Day — Full Holiday.		
<i>Friday</i>	29	Last day for dropping first term half courses.		
<i>Sunday</i>	31	Fall Convocation.		
		DECEMBER		
<i>Monday</i>	6	First term lectures end.		
<i>Tuesday</i>	7	Mid-year tests for Collegial I students begin. First Term Half Course final examinations begin.		

1972

JANUARY

Tuesday **4** Second term lectures begin.

Thursday **20** Last day for adding second term half courses.

FEBRUARY

Friday **18** Father President's Holiday — Full Holiday.

MARCH

Wednesday **1** Last day for dropping full courses and second term half courses.

Friday **10** Founders' Day

Wednesday **29** Last day of lectures.

APRIL

Monday **10** Final Examinations begin.

MAY

Friday **5** Last day for submitting documents needed to justify aegrotat standing and special examinations.

Saturday **27** Convocation.

JUNE

Thursday **1** Last day for making application to enter Loyola.

Thursday **15** Last day for making appeal to have an examination paper reviewed.

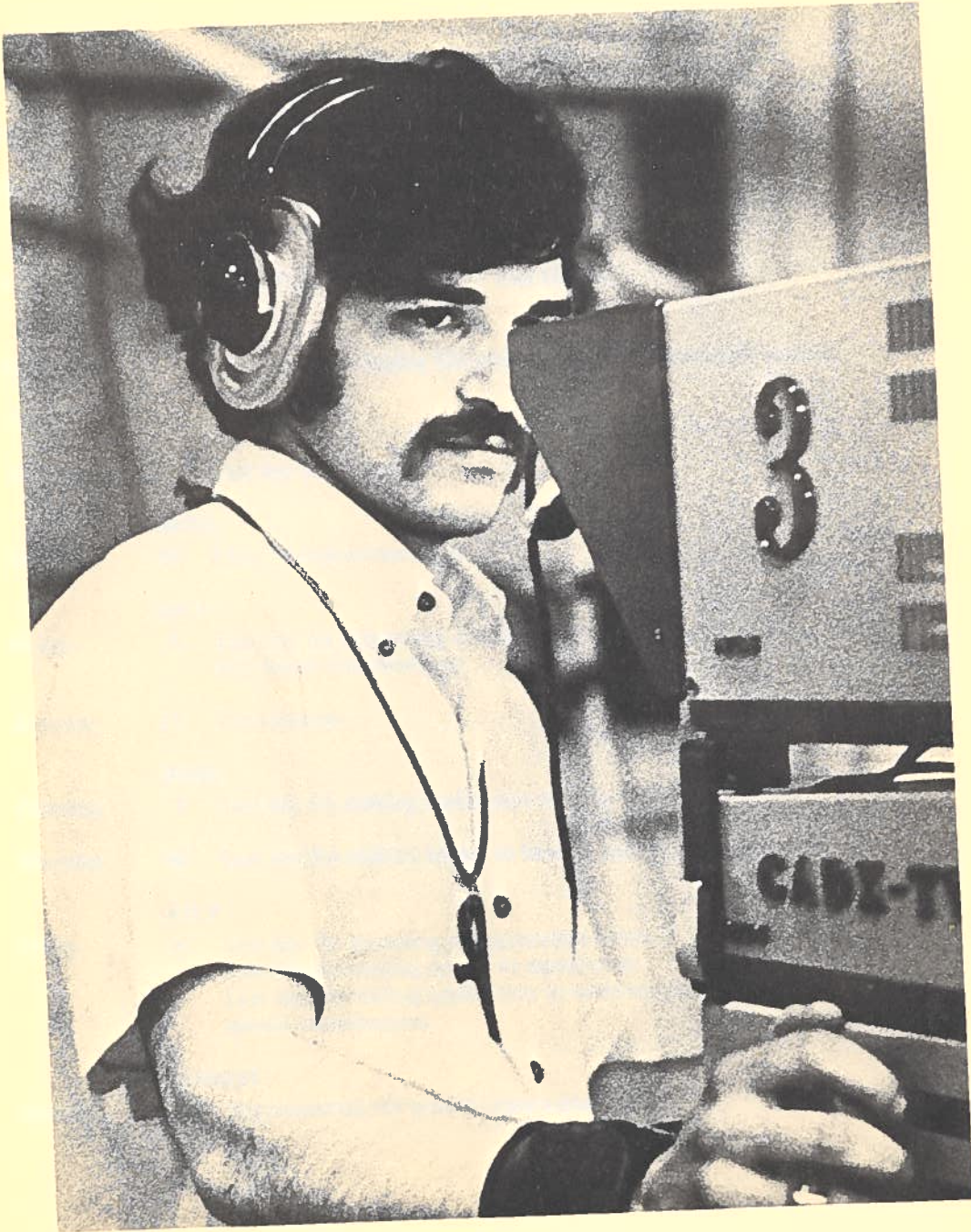
JULY

Friday **14** Last day for returning preregistration forms.
Last day for making appeal to repeat year.
Last day for making application to write supplemental and special examinations.

AUGUST

Monday **7** Supplemental and special examinations begin.





THIS IS LOYOLA

THIS IS LOYOLA

Loyola College began its own separate existence in 1899 when it was incorporated by an Act of the Quebec Legislature, although its origins can be traced back to the English side of the Jesuit Collège Ste. Marie from 1848 on. Since 1899, its degrees have been granted first by Laval University and later by the University of Montreal. The arrangement with both these universities has allowed Loyola complete autonomy and independence in the shaping of its curriculum and the conduct of its examinations.

In 1943 Loyola added to its Arts courses a Faculty of Science, from which developed the Faculty of Engineering as we know it today. A Faculty of Commerce was set up in 1948. An extension department, now known as the Evening Division, and a summer school were set up in 1957.

The academic work of Loyola has been recognized by such professional bodies as the Chemical Institute of Canada, the Engineering Institute of Canada and the Institute of Chartered Accountants of Quebec. Loyola is an autonomous member of the Association of Universities and Colleges of Canada. Many graduates of Loyola have gone on to graduate work in the major universities of Canada, the United States, the United Kingdom and France.

Aim of Loyola

The aim of Loyola College has been well stated by John Henry Cardinal Newman in a sermon preached in the University Church at Dublin entitled "Intellect, the Instrument of Religious Training" in which he says "... I wish the intellect to range with the utmost freedom, and religion to enjoy an equal freedom, but what I am stipulating for is, that they should be found in one and the same place (i.e., religion and science) and exemplified in the same persons. ... wish the same spots and the same individuals to be at once oracles of philosophy and shrines of devotion.

It will not satisfy me to have two independent systems, intellectual and religious, going at once, side by side, by a sort of division of labour and only accidentally brought together. It will not satisfy me, if religion is here and science there, and young men converse with science all day, and lodge with religion in the evening. It is not touching the evil, to which these remarks have been directed, if young men eat, and drink and sleep in one place, and think in another. I want the same roof to contain both the intellectual and moral discipline.

Devotion is not a sort of finish given to the sciences; nor is science a sort of feather in the cap, an ornament and set-off to devotion. I want the intellectual layman to be religious and the devout ecclesiastic to be intellectual. ...

Sanctity has its influence; intellect has its influence; the influence of sanctity is the greater on the long run; the influence of intellect is greater at the moment. Therefore, in the case of the young, whose education lasts a few years, where the intellect is, there is the influence. Their literary, their scientific teachers, really have the forming of them. ..."

In somewhat more modern terms, it may be said that Loyola College aims to be a Catholic academic community functioning in an ecumenical spirit as a university specializing in undergraduate teaching, contributing to the advancement of learning, the dissemination of knowledge and the betterment of man's estate. It strives to the best of its ability to become in the words of John XXIII's encyclical *Pacem in Terris* a community "whose foundation is truth, whose measure and objective is justice, whose driving force is love and whose method of attainment is freedom."

The objectives of this Association shall be to advance the interests and to promote the welfare of Loyola of Montreal, of the Association and its members, and to provide a vehicle through which former students of Loyola of Montreal may maintain their interest and express their support of their Alma Mater, to disseminate information among former students relating to developments at the College, to foster continuing contacts between former students, and to conduct projects, organize events and to do all other things necessary and useful for the College.

Alumni Association

During the course of the year, the Loyola of Montreal Alumni Association sponsors the Night at the Races, the Golf Tournament, the Oyster Party, the Sports Hall of Fame, social activities, educational activities, cultural activities, sports activities, the Past-President's Dinner, and Alumnae activities on a request basis. It also sponsors the selection and presentation of the Loyola Medal to outstanding Canadians.

A General Meeting is held every year. At this meeting officers and directors for the coming year are elected and all matters of general business transacted. The Loyola of Montreal Alumni Association sponsors the Alumni Student Loan Fund and the College Endowment Fund.

Annual giving by Alumni represents the largest single source of support to universities and colleges in North America. A regular yearly contribution to the Association aids a variety of programmes at the College.

The office of Bernard McCallum, the Director of Alumni Affairs, is located in the Hackett Building situated at 7270 Sherbrooke Street West, Second Floor. Information can be obtained at 482-0320-local 403.

*Financial
Needs of
Loyola*

The replacement value of Loyola College in buildings and educational equipment is in excess of thirty million dollars. Continual building needs call for continuing capital development support from individuals, foundations and corporations.

Government grants, tuition fees and miscellaneous operational revenues of Loyola do not cover the expense of providing educational services. As with all universities, Loyola depends on the generosity of parents, graduates and friends, through annual appeals, to provide the additional funds required to meet construction and operating needs, scholarship and bursary endowments.

Buildings

Loyola College is located on a fifty-acre site in the west end of Montreal. The structures of the College are: The Refectory Building (built in 1916); the Cafeteria and Physical Services Building (1923); the Administration Building (1927); the Chapel and Auditorium (1933); the Central Building (1947); the Drummond Science Building (1962); Hingston Hall (1963); the Georges P. Vanier Library (1964); the Physical Education Center (1966); and buildings acquired for Faculty, Administration and Student Government offices (the Hackett and Cloran Buildings (1965) and the Centennial Building (1967).

The latest addition to the College is the W.F.X. Bryan Building (1967). It houses 20 lecture rooms, an auditorium, 2 Biology labs, approximately 15 Psychology labs, and one of the best equipped Communication Arts Departments in Canada, consisting of a combination T.V. studio and film studio, audio, visual, and lighting control rooms, 2 radio studios, a photography studio, dark room, projection rooms, animation facilities and a multi-media room.

*Lecture and
Seminar
Rooms*

The 64 lecture rooms and 7 seminars have a total seating capacity of 3304 and 112 respectively. The four auditoria can seat 1,265, the largest being the F.C. Smith Auditorium which seats 570.

Laboratories

About 65,000 square feet of floor space is devoted to laboratories, allowing 1,248 student lab facilities at one time. This includes laboratories for Chemistry, Physics, Engineering, Geology and Biology. In addition, there is a calculating room with a seating capacity of 25 and 2 Language Labs with a total seating capacity of 66. The Computing Centre provides facilities to satisfy the computing requirements of students, faculty and administration. Hardware includes an IBM 1620, a Univac 9200 with on-line communications to a Univac 1108, Datacom terminals communicating with an IBM 360/50, electronic calculators, key punches, and peripheral tabulating equipment. A work area is allocated to students. The Bryan Building houses the Psychology Labs which include Human Learning Labs and Surgery Rooms. The Communication Art Laboratories contain a T.V. Studio, Projection Room, multi-media room, film editing, and photo studios.



Main Chapel The College Chapel has a seating capacity of approximately 500.

Residence Hingston Hall provides co-ed accommodations for 308 students.

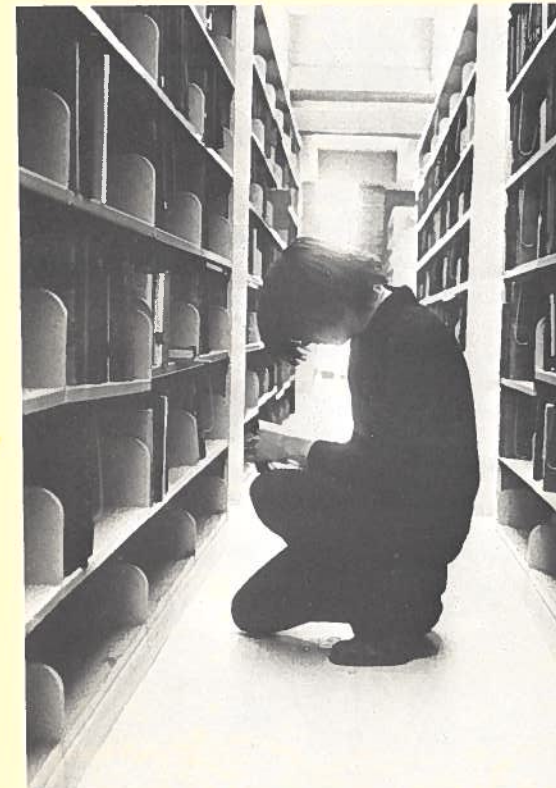
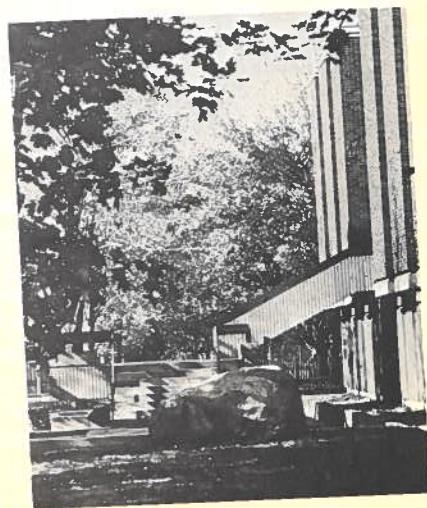
Libraries The Georges P. Vanier Library provides students with one of the most modern and well-equipped libraries in Greater Montreal. The library contains close to 140,000 volumes and more than 4,000 serial publications, spread over three floors. A Student Lounge is located in the basement and is equipped with vending machines. The total seating capacity of the library is 600.

The Science Library, which is situated in the Drummond Science Building, serves the Biology, Chemistry, Engineering, Geotechnical Science, Mathematics and Physics Departments.

The LIBRARY HOURS for both the VANIER LIBRARY and the SCIENCE LIBRARY are as follows:

Monday to Friday	8.30 A.M. to 11.30 P.M.
Saturday	9.00 A.M. to 5.00 P.M.
Sunday	2.00 P.M. to 6.00 P.M.

The libraries are closed on all legal holidays.

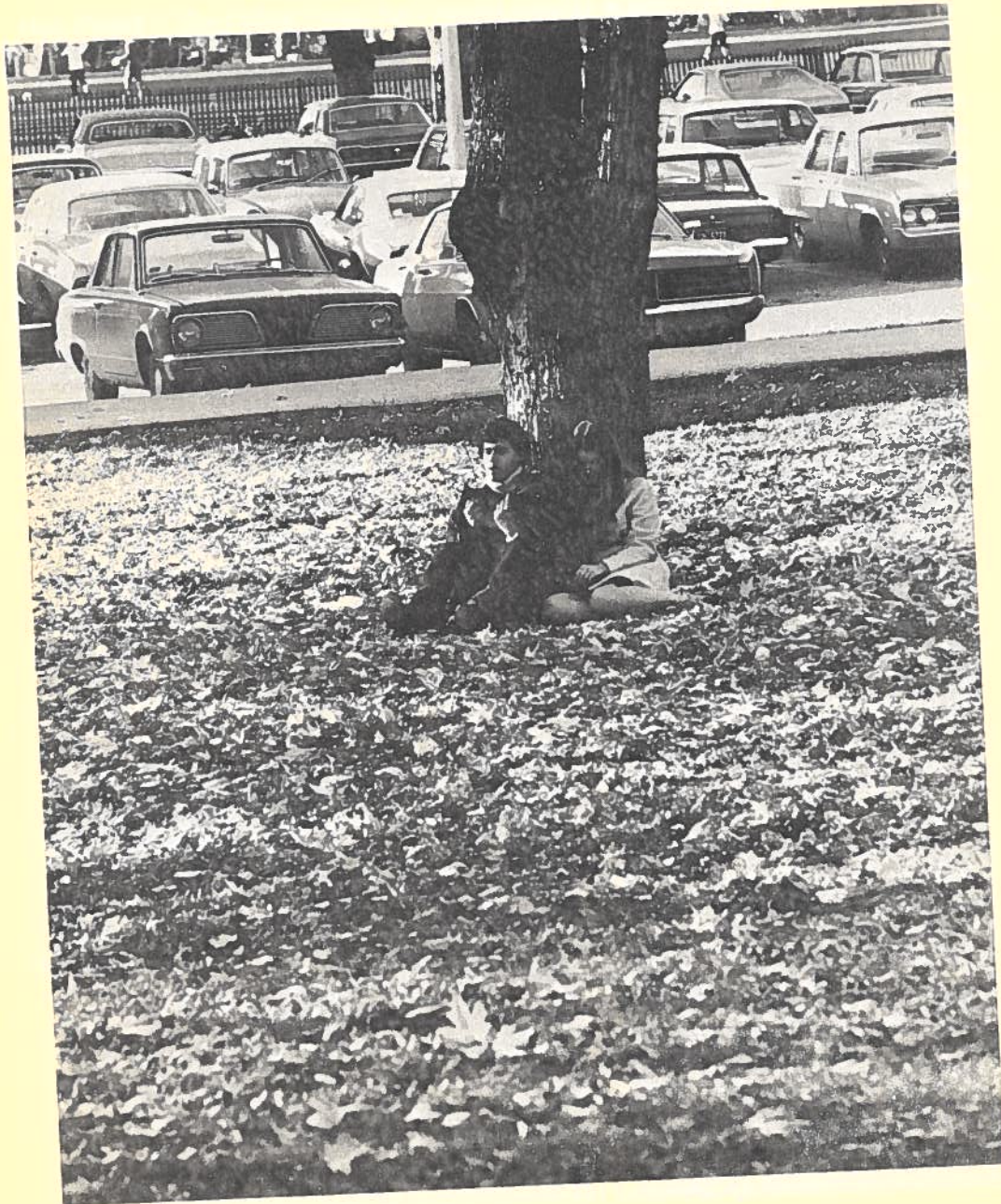


The Hingston Hall Dining Room is open to all students and provides 'a la carte' services and special hot meals daily. The seating capacity is 220. *Food Services*

The Student Cafeteria, which is located on the south side of the Physical Services Building, has a seating capacity of 250. Service includes a variety of hot foods and several vending machines.

The dining area in the Refectory Building provides a self-service snackbar and hot meals, with seating accommodations for 190.

For those who bring lunch, the Guadagni Lounge is supplied with vending machines and has a seating capacity of 100.



STUDENT LIFE

STUDENT LIFE

Student Services The Division of Student Development and Services facilitates and supports student needs, interests and activities outside the classroom.

Because of specific services and activities required, a number of departments have been created. These include the Chaplaincy, Physical Education and Athletics, Health Services, Guidance Centre, Financial Aids, Music Department, Career Planning and Placement (Canada Manpower Services), and the educational aspects of Student Residence Living.

The centrally located staff of the Division are very active in a philosophic commitment and programs for the all round development of student life. We assist, design and maintain activities that speak to the day-to-day problems and concerns and using the campus milieu for additional learning opportunities.

We try to be responsive to any member of the College in whatever ways we can serve as resource people. In response to individuals we may be helpful as counsellors, information sources, or simply as listeners. Our role at Loyola is evolving and our "response ability" is dependent upon feedback of ideas and criticism from all interested people at Loyola. We are available at any time.

Health Service The College Health Service is maintained for the benefit of students requiring medical care and advice.

Located in the Centennial Building the Health Service is staffed by two registered nurses from 9.00 a.m. to 5.30 p.m. Monday to Friday. A rest area is provided for students who may feel unwell or just want to cat-nap between classes.

Physicians are available to students daily and the psychiatrist is on campus twice weekly. Appointments are easily arranged by the nurses on duty.

We ask all freshmen and transfer students to complete a medical questionnaire and undergo a physical examination with their own physicians prior to registration. This information is confidential to the Health Service and in no way affects acceptance of a student by Loyola.

Annual chest x-ray examination is conducted during registration.

Financial Aid The Director of Financial Aid is responsible for all loan and bursary applications. In addition, all scholarship applications must be made through her office in her capacity as executive Secretary of the Scholarship Committee. All students with financial problems should apply for advice and aid through her office. Student Insurance problems, as well as Foreign Student Insurance, are handled by this department. It is her responsibility to verify financial positions of all foreign candidates for admission. For more detailed information on Financial Aid, see Pages 35 f.

To meet the varied interest of today's University students, Loyola offers a most complete and diversified program. It has been cited as one of the outstanding contemporary models in the country. The program is conducted as an integrated segment of the school's total curriculum. Its primary aims are to provide an opportunity for all students to participate, not just the dexterous individuals who play varsity sports, and to promote a high degree of physical fitness and mental alertness within the entire Loyola community.

Twenty-eight activities are offered under the supervision of a staff of professionally trained instructors and coaches encompassing all popular and individual sports for male and female students: aikido, archery, badminton, basketball, body building, broomball, cheerleading, curling, fencing, figure skating, fitness classes, football, free skating, golf, gymnastics, hockey, judo, karate, majorettes, modern dance, parachuting, physical fitness, skiing, soccer, table tennis, tennis, volleyball and weight-lifting.

There are five different levels of play and instruction; co-ed clubs, physical education activities and classes, intramurals, intercollegiate junior varsity and intercollegiate varsity.

The co-educational sports clubs open to all male and female students provide recreational physical activity in a relaxed social setting. The main themes for all clubs are "no experience necessary", "fitness" and "fun".

Grouped under the heading "Physical Education" are activities which range from free-play through instructional classes.

The men's intramurals and the women's intramurals provide keen competition and activity in team and individual sports for all. The intramural program is structured to accommodate the entire student body.

The junior varsity level operates as an extension of men's intramurals allowing greater numbers of students to be active as participants, and as training ground for students who aspire to play at the varsity level. In coaching, major emphasis is placed on developing and improving individual fundamental skills.

The traditionally strong men's varsity program is suited to meet the needs of students with prior playing experience. Loyola varsity squads successfully compete against other top ranked Canadian and regional United States University teams. To provide female students with the opportunity to compete on the intercollegiate level, Loyola also has a Women's Varsity Program.

The south campus is the focal point of the College's Physical Education and Athletic Program including full length playing fields outdoor activities and a new three million dollar physical education centre. Within the confines of the centre are found modern facilities for men and women, featuring a spacious gymnasium and an ice skating arena. Other areas include an athletic sports injury clinic complete with a diathermy machine, a paraffin bath, ultrasonic units and whirlpool baths; an activities room; administration offices;

Physical Education and Athletics

numerous dressing rooms; a lecture hall; a press box; a snack bar; table tennis facilities; a tote box for checking valuables, drawing equipment and towels; a fully equipped weight training room and a wrestling and judo room. The Loyola Sports Hall of Fame is temporarily housed in the main lobby.

For more specific information students are asked to consult the Department of Physical Education and Athletics Guide which is issued annually at registration.



Loyola offers students the services of chaplains, Catholic and non-Catholic. They aim for contact with all students and at helping them with any problem. They listen. They are aware of the winds of change now blowing, and hence of the necessity of flexibility, of being liberal minded and of adapting to the shifting needs of the day. They try to bring people to be committed to some set of values, to face and take a stand on the meaning of human life, and on its ultimate issues.

They provide, with student initiative and cooperation, liturgies that try to express in visible form the convictions, values and beliefs of the Loyola community.

Catholic liturgies: Main Chapel: 12.05 daily, 11.15 Sundays.

Chaplaincy

Loyola of Montreal has a modern residence hall — Hingston, which can accommodate a maximum of 312 resident students in 132 single rooms, 84 doubles and 12 singles with toilet facilities.

Hingston has two four-floor wings, centered by the main entrance and the common lounge. Student recreational facilities, study rooms, offices and chapel are located on the ground floor. Dining room facilities are included in the complex as well as a snack-bar provided for resident students.

Hingston is a co-educational residence hall provided with the aim of promoting para-academic learning. Specifically residence affords an experience in group living the designed outcome of which is an increase in interpersonal relationships and social growth. Individuals are encouraged to choose their own lifestyles while respecting those of others.

The room contract includes the rental of linen, blankets and pillows.

All Freshmen, male and female, coming from outside the Montreal area under 21 years of age are required to live in residence.

Application for residence should be made to the Manager of Residence, Hingston Hall, Loyola College, 7141 Sherbrooke St. West, Montreal 262 Quebec, Canada.

For Residence Fees see Page 34.

Residence

All freshmen students under twenty-one years of age not living in the home of their parents or legal guardian, shall be required to live in residence. Exceptions to these policies may be made for sufficient reason by the Dean of Women or the Director of Men's Housing. Permission to live out of residence requires a letter of approval from parents, except, of course, for those over twenty-one years of age. All students living off Campus, but not at home, must list their Montreal area address with the Dean of Students office.

Off Campus Housing Policy

GUIDANCE CENTRE

<i>Educational Plans Vocations Careers Graduate Studies</i>	Loyola is sensitively conscious of the individuality of each student as a person and is seriously concerned about the all-round development of each and every student. To this end, assistance is available in many forms. As part of the Student Services, the Guidance Centre offers all students a unique opportunity to get to know themselves better and thus be prepared to realize their individual potential more fully.
<i>Study Skills</i>	Are your Educational Plans well formulated?
<i>Effective Reading</i>	How productive are your study habits? Would you like to improve your reading technique and get more out of what you read?
<i>Psychological Testing</i>	What are your thoughts and plans about a vocation, a career? Is graduate work a possibility? It might be profitable to discuss, your aspirations with a trained, experienced Counsellor.
<i>Personal</i>	Are you relating to people to your satisfaction? Are you interested in how bright you are? What are your aptitudes? What kind of a person are you? Perhaps some psychological testing could be helpful to you.
<i>Confidential</i>	Is there something personal that you would like to discuss? You can do so in the full confidence that it will rest between you and your counsellor. You don't need to have a problem to come to the Centre. The Counsellor will help you with anything if you feel that you want such help. The Guidance Centre is in the Centennial Building at 6935 Sherbrooke Street West. It is your Centre. You are invited to make the fullest use of its facilities.

MUSIC AT LOYOLA

<i>Choral Society Orchestra Madrigals Piano</i>	The Music Department provides an opportunity for furthering the musical interests and talents of the entire college community. Though facilities are limited the department provides a fairly large record library with listening rooms and practice rooms for piano.
<i>Music Listening Musical Instructions</i>	Should there be sufficient interest and demand musical instruction in guitar, woodwind, recorder and brass can be arranged. The Choral Society, Madrigal and Chamber Orchestra aim at two or three concerts per year. They welcome and encourage new talents.

STUDENT GOVERNMENT

The Loyola of Montreal Students' Association Incorporated in 1966, is the governing body of the Student Association. All full-time day students are automatically members. A student activity fee, collected from day students at registration, finances the L.M.S.A. *L.M.S.A.*

The Association is designed to serve both the interests of Loyola day students and the college community as a whole. While traditionally dedicated to meeting the social and cultural wants of its members, the L.M.S.A. is also deeply involved in the academic life of the college and working towards specific academic reforms.

The L.M.S.A. is composed of three elements; the Executive, the Board of Directors (legislative body), and the Senate (judicial body).

The President and executive vice-president are elected annually during the early part of February. Together with the appointed members of their executive, the Vice-president for educational affairs, the Vice-president for financial affairs, and the Vice-president for external affairs, they see to the daily operation of the Association, and carry out the policies of the Board. *Executive*

The Board of Directors is the legislative body of L.M.S.A. Sixteen members are elected annually as voting members of the Board, in proportion to the students enrolled in each faculty. Their primary purpose is the regulation and co-ordination of the policies and activities of the Association in the best interests of the students. *Board of Directors*

The Student Senate is the judicial body of the L.M.S.A. It is composed of eight members elected by the Board of Directors from a slate prepared by the outgoing Senate, which dissolves itself annually during the latter part of the second semester. It has jurisdiction over matters affecting student discipline and constitutional interpretation, as well as selecting those who serve on the Loyola Student Judiciary Board. *Senate*

Among its many functions the Senate serves as an Academic Committee where students may appeal any alleged violations of their academic rights.

Most importantly, it acts as the guarantor of students' rights as defined in the Bill of Rights of the L.M.S.A.

The Freshman Reception Committee works during the first weeks of the academic year to acquaint newcomers with life within their academic community. The Committee's program is of broad social and academic interest. *Committees*

The Course Evaluation Committee oversees a college-wide evaluation of day division courses during the latter part of the second semester. The results are published in the form of a course evaluation guide which is available free of charge to all students prior to registration for the upcoming academic year.

The Carnival Committee is responsible for planning a week of entertainment to serve as a break before the homestretch of the second term leading to final examinations. Its events are among the most popular at Loyola and include a Day-up-North, the Carnival Ball and several sporting events.

The Graduation Committee organizes the Graduation Ball and certain other matters of special interest to graduates.

Member Organizations

Different interests are served by such associations as Loyola Arts Students' Association, Commerce and Science Students' Associations and the Engineering Undergraduate Association.

There are also societies for the departments of Communication Arts, Economic, English, History, Modern Languages, and Sociology. There are the African, Camera, Investment, Drama and Debating Clubs, the Society for the Advancement of Management, Women's Liberation, Photo Loyola, the Liberal Association and the International Association of Students of Economics and Commerce. Join Days offer the opportunity for prospective members to learn more about any of the L.M.S.A. committees, clubs, societies and associations. The offices of most of these organizations are situated in the Centennial Building at 6931 Sherbrooke Street West, Telephone: 482-9280 for further information.

Publications

The Board of Publications acts as a supervisory board for the distribution of all publications relevant to student life originating on and off campus.

The Board is composed of five voting members, with jurisdiction over the Loyola News, the official student newspaper, the Review, the student yearbook, the Student Directory, Radio Loyola, Photo Loyola and all other minor campus student concerned publications.

Drama Society

The purpose of the Drama Society is to actively promote interest in drama on campus, and specifically to produce several productions during the academic year.

We'd like to give equal opportunity to all Loyola students to become involved. Experience or not — all are welcome. We feel sure that there is a waste amount of talent to be yet uncovered, and we'd like to give these people a chance. It was with this aim in mind that we inaugurated the lunch time theatre, as a stepping stone, towards further involvement in full scale productions.

The aim of Loyola Musical Theatre is to provide several dramatic productions and a musical every academic year in order to actively encourage the campus' cultural potential. Next year's schedule include "Richard II", "The Devils", "Who's Afraid of Virginia Woolf" and "Oliver".

Those interested in singing, acting or sharing in the preparation of musical productions are invited to visit the Student Office in the Music Department.

Musical Theatre Society

There are seven fraternities and three sororities on campus. On the men's side are Tau Kappa Epsilon, Theta Sigma, Sigma Theta Pi, Phi Kappa Theta, Delta Epsilon Rho, Phi Lambda Rho, and Delta Chi. For the women are Phi Delta, Lambda Pi Epsilon, and Zeta Tau Omega.

Fraternities and Sororities

College policies designed for student conduct are made for the sole purpose of guaranteeing that each member of the academic community has the right to study protected from those who are motivated otherwise.

College Rules and Regulations

The Loyola Community recognizes the necessity for maintaining an environment conducive to learning through reasonable campus rules and regulations (applied via adequate, substantive and procedural due process) which encourage the student to be self-reliant and responsible.

Further it is recognized: 1. That such rules and regulations are consonant with the two-fold responsibility of the college to the entire student body and to the student as an individual. 2. That any individual charged with a breach of campus policy be assured of a fair and just hearing, be accorded the right to explicitly stated charges, an open hearing, and confrontation of witnesses. 3. That the burden is on the accuser to prove that the accused committed the acts charged, not on the accused to prove innocence.

Students are not permitted to possess alcoholic beverages on the Loyola Campus. Exceptions for group events can be obtained by permission from, and under conditions set by the office of the Dean of Students. Applications for such exceptions must be made one week prior to the event and the Events Coordination office will require written assurance that the laws of the Province of Quebec and the rules of Loyola of Montreal will be observed. However, residence halls shall determine their own policies on the use of alcohol except for public events.

Students are expected to act in an orderly manner on campus. Any student acting otherwise will be subject to penalties according to the gravity of the offence.

The use and/or possession of hallucinogenic drugs, as well as drugs specifically prohibited by law, are not permitted on the Loyola campus. The penalty for the dispensing or sale of drugs on campus may be dismissal.

Respect for college policy requires that each student assume responsibility for his actions, respect constituted authority, protect both private and public property and conduct himself at all times in a lawful manner. This clearly implies that the rights of others are to be respected.

YOUR ATTENTION IS INVITED TO THE FACT THAT REGISTRATION AT LOYOLA OF MONTREAL INVOLVES THE STUDENTS' ACCEPTANCE OF NOT ONLY ACADEMIC REGULATIONS, BUT ALSO THE REGULATIONS GOVERNING STUDENT CONDUCT. THESE RULES ARE SUBJECT TO CHANGE BY ACT OF THE COLLEGE SENATE.

Student Handbook

The Student Handbook published each year is distributed to all students at registration in September. Students are held responsible for knowing and observing the policies contained therein. The Handbook contains a wealth of information which serves as a handy reference for students and faculty alike.

Student Court

A Student Judiciary Board consisting of seven members appointed by the Student Senate receives complaints of non-academic student discipline within the college community. Three members chosen by and from this Judiciary Board clarify complaints and inform each plaintiff and defendant of his rights. They may decide, then, to convene a hearing under the Loyola Code by one of the Student Courts.

Student Courts are composed of five full-time day students selected at random from a pool of 15 students appointed by the Student Senate. These five members shall hear a particular case until judgement has been reached.

An Appeal Board acts as a Court of Final Appeal and is composed of two faculty and three full-time students. The Appeal Board can sustain the decision of the lower court, reduce the sentence for cause or decide in favour of the appellant whether he is the plaintiff or defendant.

The Judicial Officer — a faculty member holding a degree in law, is available to all students for advice in legal matters. (His name is Prof. Marcel Danis. Call Loyola Switchboard for his office location and extension number).

ACADEMIC REGULATIONS

Full-time students are those registered for the equivalent of four or more full courses.

Part-time students are those registered for the equivalent of less than four courses.

A degree candidate is a student proceeding to a degree.

A special student is one who is not proceeding towards a degree.

Students admitted to the University Program will normally require three calendar years to obtain a Bachelor's degree.

No student will be awarded a degree unless he has been registered as a full-time student for at least 1 academic year. He must have completed at least half of his program at Loyola.

A student normally may not register for more than 4 academic years as a full-time student in the same faculty.

A full-time student must register for at least (the equivalent of) four full courses and not more than (the equivalent of) seven full courses during an academic year (excluding courses taken in the Summer School).

The normal course load for each year is indicated in departmental programs; additional courses can only be taken with the approval of Departmental Chairman and Dean.

Students must register annually at the times specified in the Academic Calendar (see page 1). Each student must register according to faculty, type of degree, department, year (e.g. B.Sc. Honours Mathematics 2) and courses.

Note: A special fee of \$15 is charged for late registration.

Degree candidates who expect to complete the requirements for the degree for which they are registered in a particular year must, before March 2 of that year, make application for the degree on forms provided by the Transcript Office. A student can receive only one degree in any given academic year. A student can receive only one degree in any given faculty.

A student who has graduated and wishes to proceed to another degree must spend at least one more academic year as a full-time or part-time degree candidate and must successfully complete a minimum of 5 courses (other than those taken while registered for the first degree). He must register with a department in an approved program.

Change of registration includes transfer of Department or Faculty.

Categories of Students

Length of Programs

Year's Load

Registration

Graduation Registration

Change of Registration

A student who wishes to change his registration must observe the following deadlines:

a) **Changes Involving Registration in a New Course —**

For a first term half-course or a full course, the registration must be completed before October 1st.

For a second term half-course, the registration must be completed before January 20.

b) **Changes which Involve only the Dropping of a Course —**

For a first-term half-course, registration must be changed before November 1st.

For a full course and a second-term half-course, registration must be changed before March 1st.

All changes require completion of a "Change of Registration" Form, obtainable from the Records Office, and require approval of Chairmen of the departments and Deans involved.

*Exchange
Students*

A student may study for one year at another University and have his work credited towards his degree provided his Chairman and Dean have given prior approval of the course of study. It is the responsibility of the student to ensure that the course of study will satisfy the requirements of the program he is following at Loyola. Only in exceptional circumstances may a student complete his final year as an exchange student. A student may take a course from another university-level institution if that course has been approved by the Departmental Chairman and the Dean concerned.

*Academic
Status*

In order to continue in a program as a degree candidate, a student must have passed 2/3 of the cumulative total of courses for which he has been registered in that program (including repeated courses). Included in the cumulative total will be courses completed in the Loyola University Program or equivalent programs at other institutions *following* the acceptance of a student as a degree candidate at Loyola.

This is an absolute minimum requirement; a department may recommend to the Academic Standing Committee that a student not be allowed to register in that department even though this condition has been fulfilled.

A student whose record would debar him from registration may be permitted to take courses in Summer School with a view to meeting the above requirement. This action can be taken only if recommended by his Departmental Chairman and is subject to meeting the registration requirements in Summer School.

The department will constitute a Committee of at least three members to consider the appeal.

The decision of the department shall be communicated by the chairman to the student and a copy sent to the Dean of the Faculty and to the Chairman of the Academic Standing Committee.

An appeal against the departmental decision can be made to the Academic Standing Committee. Such an appeal (in writing) must be lodged within two weeks of the transmission of the departmental decision.

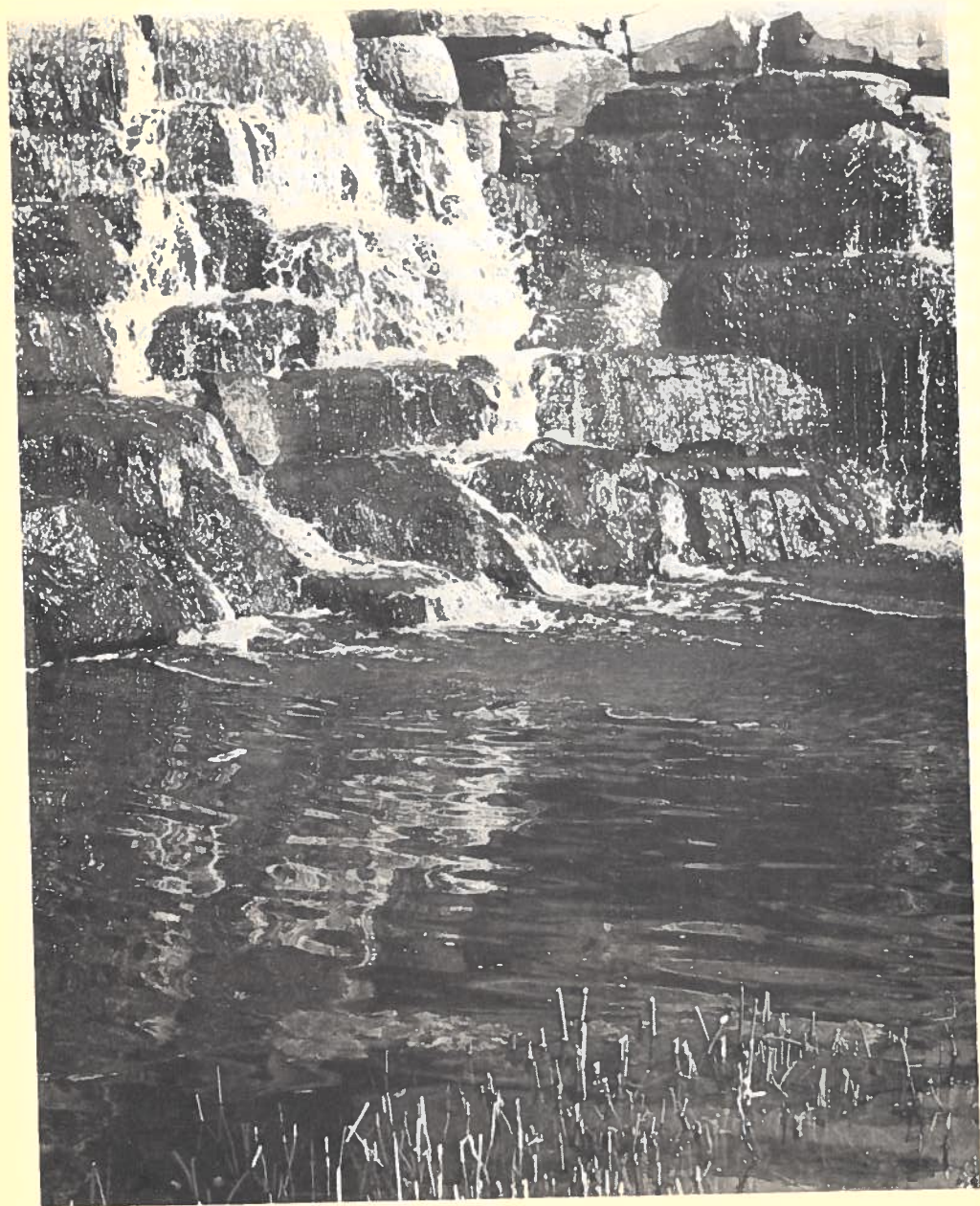
The Academic Standing Committee will investigate each such appeal consulting the department in question and the ombudsman appointed by the Loyola of Montreal Students' Association. The decision of the Committee will be sent to the appellant and a copy to the Chairman of the department.

A Note on the Writing of Papers —

Essays and research papers should demonstrate the student's ability to think originally and to use sources (when necessary) intelligently. Deliberate or inadvertent plagiarism represents, in varying degrees, a failure to think critically or creatively, and will usually result in at least a failing grade for the assignment.

In general, plagiarism is an attempt to "pass off" the words or ideas of another author as one's own, and usually appears in the following two forms: the *verbatim copying or translating* of a phrase, sentence or paragraph, from the writing of another, and/or *paraphrasing directly or through translation* the writing, idea or pattern of ideas, of another, without acknowledging the source by proper documentation (i.e., quotation marks *and* footnotes in the first case, footnotes in the second case). If the writer of a paper is conscientious, uses common sense, and has sufficient respect for his or her own work, as well as for the work of others, plagiarism should not be a problem.

The student who requires more specific guidelines than are presented here, is advised to consult with the professor to whom he or she is submitting written work.



ADMISSIONS AND FINANCES

ADMISSIONS

Collegial- University Program

All applicants to Loyola College for the 1971-72 academic year should be aware of a fundamental change in the character of the degree programme which Loyola, in common with all other institutions of higher education in the Province of Quebec, put into effect in 1969. This is a change from the four-year degree programme to a five-year collegial-university pattern of studies. The first two years of this programme will consist of collegial studies; the last three years of university studies. The collegial programme will emphasize general education; the university programme will emphasize specialized education.

This change from a four-year to a five-year programme is being introduced in stages as the students who entered the first year of the five-year programme in September 1969 move into the upper years and as students who entered the four-year programme before September 1969 complete their degrees. Thus, in the academic year 1971-72, the following levels will be offered at Loyola:

Collegial:	1 st year)	New (five-year) Programme
	2 nd year)	
University:	1st year	New (five-year) Programme
	4th year	Old (four-year) Programme

Admission to University I

To be eligible for admission to the first year of the new three-year University programme candidates from Quebec must have successfully completed the two-year Collegial or C.E.G.E.P. programme and be in possession of the Diplôme d'Etudes Collégiales. Certain faculties and certain departments will require specific course requirements for admissibility, particularly in Science and Engineering. For most departments in the faculties of Arts and Commerce the possession of the Diplôme d'Etudes Collégiales will suffice.

Students from outside Quebec who have completed 13 years of schooling will be considered for admittance to University I.

Candidates are invited to write or to visit the Admissions Office for clarification of their particular status. Also, because all students in the programme must register with a specific department, candidates are encouraged to get in touch with the department chairman of the discipline in which they are interested.

Applications may be obtained from the Admissions Office and should be submitted BEFORE JUNE 1st to:

*Admissions
Procedure*

The Admissions Office
Loyola of Montreal
7141 Sherbrooke Street West
Montreal 262, Quebec

NOTE: All documents become the property of the college if the applicant is accepted.

Students transferring from the Loyola Evening Division to the Day Division must follow the same procedures as any new applicant to the Day Division.

*Transferring from
Loyola
Evening Division*

TUITION AND FEES

TUITION AND FEES MUST BE PAID AT THE TIME OF REGISTRATION.

However, a student may, in special cases of hardship and with the consent of the Bursar, pay Tuition and Fees in two instalments. The first instalment of Tuition and Fees covering the first term must be paid in full at registration. The second term fees must be paid in full on or before 10th January following. In such cases an instalment fee of \$10.00 will be charged. Evidence of Loyola Scholarship Awards or Loyola Bursaries must be submitted at time of registration. If a partial Loyola Scholarship or Bursary is awarded, the balance of Tuition and Fees must be paid at registration. Students who have applied for Provincial or Federal Government Bursaries must still settle their fees at registration in accordance with the above.

Students will not be considered registered and may not attend classes until the required fees have been paid or arrangements for payment made with the Bursar.

Failure to make payments of Tuition and Fees or other amounts owed the college when due or to arrange for such payments before their delinquent dates, is sufficient cause to bar the student from classes or examinations and to withhold Diploma, Scholastic Certificate or Transcript of Record until the debt has been adjusted with the Bursar's Office.

Any damage done to any property of the College will be charged to the offender's account.

Drafts, cheques, money orders etc., should be made payable at par to "LOYOLA COLLEGE" and addressed to the BURSAR, LOYOLA COLLEGE, 7141 SHERBROOKE STREET WEST, MONTREAL 262, QUEBEC.

Fees must be paid on due date, no bills are issued.
All payments must be made in "Canadian Funds".
Postdated cheques will not be accepted.

NO REFUNDS WILL BE RETURNED SHOULD THE INSTITUTION CLOSE FOR A BRIEF PERIOD AS A RESULT OF A FORTUITOUS EVENT.

Tuition- University Program	1st and 4th year	
	Arts (General Course)*	\$270.00 per half year \$540.00 per year
	Communication Arts*	287.50 per half year 575.00 per year
	Science*	287.50 per half year 575.00 per year
	Engineering*	297.50 per half year 595.00 per year
	Commerce*	270.00 per half year 540.00 per year

*The above fees were applicable to 1970-71 academic year, and are subject to change for the 1971-72 academic year without notice.

IN CASE WHERE CHEQUES ARE RETURNED TO THE COLLEGE MARKED "NOT SUFFICIENT FUNDS" THERE WILL BE A \$5.00 CHARGE.

A \$15.00 SURCHARGE WILL BE ADDED TO ALL UNPAID FEES AS OF JANUARY 15th.

Student Activity Fee	Payable at Registration	
	Student Administrative Council	\$ 16.00
	Student Centre Building Fee	10.00
	Loyola College Athletic Association	17.00
	TOTAL - (Payable at Registration)	\$ 43.00

Payable at Registration

Tuition, extra subject (in addition to regular program)	\$100.00
Registration Fee (Payable on first entrance only)	5.00
Late Registration Fee	15.00
Library Fee	5.00
Medical Fee	3.00
Accident Insurance - Compulsory	5.00
* Graduation Fee - 4th year students	20.00
* Comprehensive Sickness and Hospitalization (non-Canadian students require)	25.00
* Lockers: Rental - \$5.00 Locks - \$2.00	

* To be paid in cash at Registration. College locks must be used. \$1.00 will be refunded at the Bookstore from April 15 to May 15 only, for each lock in good condition, labelled with combination.

Payable on date of each Application

Supplemental examination, each	\$ 7.00
Special examinations	15.00
* Transcripts (Full)	1.00
* Transcripts (Partial)	.50
Parking Permit	10.00
Local examination privileges, each examination	15.00
* Transcripts are released only when all outstanding balances have been paid.	
Duplicate of Official Receipt	2.00

Any student who is forced to withdraw from the College is required to notify the Registrar in person or in writing. Withdrawal notices for the purposes of refund will be effective on date of receipt by the Registrar. No telephone withdrawals will be accepted.

If, after paying the fees, a student finds it impossible to continue at College, a refund of tuition only will be made from the date of withdrawal on the following basis:

Registration date to September 30	Basic charge of tuition - 1/8
October 1 to October 31	Basic charge of tuition - 2/8
November 1 to November 30	Basic charge of tuition - 3/8
December 1 to January 15	Basic charge of tuition - 4/8
January 16 to January 31	Basic charge of tuition - 5/8
February 1 to February 28	Basic charge of tuition - 6/8
March 1 to March 31	Basic charge of tuition - 7/8
After March 31	NO REFUND

STUDENT ACTIVITY FEE AND OTHER SPECIAL FEES ARE NOT REFUNDABLE.

*Special
Fees*

*Withdrawals
and
Adjustments*

RESIDENCE FEES

Meals Room contract at Loyola does not include meals.

Meals can be contracted for on a yearly basis at a cost of approximately \$500.00. Several plans are usually in effect and the resident may choose the one most suitable to his needs. He may also prefer to pay as he goes on an a-la-carte basis anywhere on the campus.

Fees Parking facilities for resident students are the same as for other students on the campus. Parking permits may be obtained for a fee of \$10.00. Residence fees (exclusive of the Christmas holidays) are as follows:

Single Room	\$540.00
Double Room	\$465.00
Single Room with bath	\$640.00
Damage and development fee (non-refundable)	\$ 15.00
Residence Activity Fee (non-refundable)	\$ 13.00
Refundable Damage deposit	\$ 50.00
Room Deposit which must accompany each application	\$ 50.00

The room deposit of \$50.00 will be deducted from the payment due on entrance. The money will be refunded upon request if the student is not accepted or if the applicant cancels the room reservation by September 1, prior to registration.

RESIDENCE FEES MAY BE PAID IN TWO INSTALMENTS, THE FIRST INSTALMENT OF RESIDENCE FEES COVERING THE FIRST TERM MUST BE PAID IN FULL AT REGISTRATION.

THE SECOND TERM FEES MUST BE PAID IN FULL ON OR BEFORE JANUARY TENTH FOLLOWING.

No student will be permitted into residence before settlement of the account has been made in accordance with the above regulations.

The College reserves the right to make changes without notice in the published scale of fees, if, in the opinion of the College, circumstances so require.

Students will not be considered registered and may not attend classes until the required fees have been paid or arrangements for payment made with the Bursar. Failure to make payments of tuition, fees or other amounts owed the College when due, or to arrange for such payments before their delinquent dates, is sufficient cause to bar the student from classes or examinations and to withhold diplomas, scholastic certificate or transcript of record until the debt has been adjusted with the Bursar's office.

To ensure favourable consideration of your application, it is recommended that applications be submitted prior to August 15.

The College reserves the right to place the student in whatever rooms seem to be best in the interests of the student's programme as a whole, but careful consideration will be given to preferences expressed.

All residence fees are payable in CANADIAN FUNDS, and cheques will be made payable to Loyola College. Residents are required to vacate their rooms within 24 hours of the last examination.

FINANCIAL AID

THE BANK OF MONTREAL SCHOLARSHIP to a student in Loyola's Department of Communication Arts Radio Course. The award is to the student who is judged to be the best overall participant in the CJAD News Research Team Project. VALUE \$1,000.00

A scholarship is awarded in recognition of outstanding academic achievement. A scholarship winner is given the title of "Loyola Scholar".

Scholarships are renewable if the Scholarship Committee feels that the holders have maintained a sufficiently high standing.

No student with supplemental examinations will be eligible for a scholarship or if he already holds a scholarship, for its renewal.

If a student holding a scholarship decides to change faculty he will retain the scholarship only on condition that he receives the approval of the Scholarship Committee.

No student may hold more than one scholarship from the College at any one time.

Gifts by the College

Entrance Scholarships – value – full tuition.

Thirty-five full-tuition scholarships renewable for two years are available for students entering University I. Apply prior to March 15th.

Fourth Year – Arts, number: 17; Commerce, number: 3; Science, number: 9; Engineering, number: 3. VALUE – FULL TUITION.

Scholarships

THE BARTLETT MEMORIAL SCHOLARSHIP.	VALUE \$100.00
THE BARTLETT-DOHERTY MEMORIAL SCHOLARSHIP.	VALUE \$100.00
THE GASSON MEMORIAL SCHOLARSHIP.	VALUE \$100.00
THE JONES MEMORIAL SCHOLARSHIP.	VALUE \$100.00
THE McCARTHY MEMORIAL SCHOLARSHIP.	VALUE \$100.00
THE McMAHON MEMORIAL SCHOLARSHIP.	VALUE \$100.00
THE O'BRYAN MEMORIAL SCHOLARSHIP.	VALUE \$100.00
THE O'DOWD MEMORIAL SCHOLARSHIP.	VALUE \$100.00
THE PRESIDENT'S SCHOLARSHIPS. — Three	VALUE \$100.00
THE J.S. O'NEIL SCHOLARSHIP. Donated by J.S. O'Neil	VALUE \$100.00

Annual Gift Scholarships

THE CHARLES BROWN MEMORIAL SCHOLARSHIP	VALUE \$100.00
THE MRS. CHARLES BROWN SCHOLARSHIPS	VALUE \$100.00
Number: Two	VALUE \$100.00
THE GUTELIUS MEMORIAL SCHOLARSHIP	VALUE \$100.00
THE KNIGHTS OF COLUMBUS COUNCIL	VALUE \$100.00
284 SCHOLARSHIP	
THE STATE COUNCIL, KNIGHTS OF COLUMBUS	VALUE \$100.00
PROVINCE OF QUEBEC SCHOLARSHIP	

Endowed Scholarships:

THE LILLY F. BARRY SCHOLARSHIPS. Three	VALUE \$100.00
THE URSULA CARLING SCHOLARSHIPS.	
These are an endowment from the estate of the late Mrs. Ursula Carling. Two	VALUE \$100.00
THE CLORAN MEMORIAL SCHOLARSHIP.	VALUE \$100.00
THE COLLINS-HEFFERNAN SCHOLARSHIP	
Funds from the Mary Ellen Heffernan Bursary and the Nelson Collins Scholarship.	VALUE \$100.00
THE CUDDY-STANFORD MEMORIAL SCHOLARSHIP.	
Funds from the John M. Cuddy Scholarship and from the Stanford Memorial Scholarship	VALUE \$100.00
THE DOWLING-MORIARTY SCHOLARSHIP.	
Funds from the estate of the late Francis J. Dowling and of the late Mrs. E. Stowell, widow of the late John Moriarty.	VALUE \$100.00
THE MRS. F.J. DUCKETT SCHOLARSHIP.	
From the estate of the late Mrs. F.J. Duckett	VALUE \$100.00

THE FRIENDS OF LOYOLA SCHOLARSHIP.

From the funds endowed from the James Corcoran Scholarship, the Rev. William Doherty Scholarship the Dollard Scholarship, and the Gregory O'Bryan Scholarship and from the funds given by the Student's Penny Scholarship. VALUE \$100.00

THE ARTHUR HALLEY MEMORIAL SCHOLARSHIP.

Endowment from F. Halley of St. John's Newfoundland in memory of his son, Arthur, a graduate of the Pre-Medical class of 1946, Magna Cum Laude, who died on the eve of Convocation. VALUE \$100.00

THE MR. AND MRS. THOMAS WILLIAM KAVANAUGH MEMORIAL SCHOLARSHIP.

Donated by the Rev. Thomas W. Kavanaugh. VALUE \$100.00

THE LOYOLA SODALITY SCHOLARSHIP.

Funds from the Sodality Scholarship and from the Loyola Scholarship Club Association Bursary. VALUE \$100.00

THE MAHONEY-MURPHY MEMORIAL SCHOLARSHIP.

Originally established as the Mother Ellen Memorial Scholarship, and as the John Walsh Murphy Memorial Scholarship. VALUE \$100.00

THE KENNETH J. McARDLE MEMORIAL SCHOLARSHIP.

Donated by Mrs. Mary McArdle as a tribute to the memory of her late husband Kenneth J. McArdle. VALUE \$100.00

THE ST. IGNATIUS PARISH SCHOLARSHIP.

Money collected and presented to the St. Ignatius Men's Association and originally known as the Coronation Arts Courses Scholarship. VALUE \$100.00

THE SHARP-O'REILLY SCHOLARSHIP.

Funds from the Alice M. Sharp Scholarship and from the Winnifred O'Reilly Memorial Bursary. VALUE \$100.00

THE JAMES WEBER MEMORIAL SCHOLARSHIP.

Awarded in memory of a member of the class of 1970. Apply to Director, Financial Aid.

The Judith Roman Memorial Scholarship Fund:

Established through the generosity of Mr. and Mrs. John Z. Roman offers a limited number of Scholarships to qualified students.

Royal Canadian Engineers Memorial Scholarships:

Scholarships of up to \$500.00 each are offered annually to students, both male and female, who are attending any educational course of study or practical training course beyond secondary school level. Scholarships are awarded on the basis of merit and need to the most suitable candidates from among those who apply.

A candidate to be eligible for the scholarship must be the child or grandchild of a person who served in any rank in any of the following components of the Canadian Armed Forces: a) A Royal Canadian Engineer component of the Canadian Army during World War I, World War II, or under the United Nations in Korea; or b) The Royal Canadian Engineers in the Canadian Army Regular or Permanent Force or Militia or non-Permanent Active Militia, for not less than three continuous years; or c) The Military Engineers Branch of the unified Canadian Armed Forces for not less than three continuous years after the First day of February 1966. Apply: Deputy Chief of Construction – Military Engineering Advisor, DCC-NEA Building # 105, Canadian Forces Headquarters, Victoria Island, Ottawa.

Commonwealth Scholarships:

Under a plan worked out at the Commonwealth Education Conference at Oxford in 1959 responsibility is shared between the Canadian Commonwealth Scholarship and Fellowship Committee and the External Aid Office to enable an increased number of able students to share in the wide range of educational resources available through the Commonwealth. An undergraduate award is made for the period required to enable the student to obtain his degree. For information consult the Canadian Commonwealth Scholarship and Fellowship Committee c/o Association of Universities and Colleges of Canada; or The Director General, External Aid Office, both at 151 Slater St., Ottawa 4, Ontario.

Bursaries A bursary is a sum of money given to a student in order to assist him financially in the continuation of his studies.

Due to the greatly increased demand for financial aid all students must apply first to their own province and/or state and accept maximum loan and bursary aid from these sources.

The Financial Aid Office exists solely to assist students and to help them find financial aid should they need it.

The basic principle in awarding financial aid is that the primary obligation to pay for an education rests with the students and their parents. This means that a student is expected to have savings from his summer employment and that his parents must contribute according to their ability for the student's expenses.

Thus Loyola funds cannot normally be used to compensate for a student's failure to apply for and accept the maximum Government assistance available to them.

Should a student need more than this maximum Government assistance a bursary may be granted.

A bursary will take the form of a credit to the student's tuition account. Ordinarily bursaries will not be awarded to students with less than a 50% overall average. Applications for Bursaries should be made as early as possible to the Director, Financial Aid, Loyola of Montreal.

The IBM Thomas J. Watson Memorial Bursaries:

Donated by the International Business Machines Company Limited as part of the IBM Thomas J. Watson Memorial Bursary Program. Number: two. Value \$500.00 each. Awarded annually to needy undergraduates in any year and any faculty who are in good academic standing. Apply to the Director, Financial Aid, as soon as possible.

The Loyola African Bursaries:

Type "A" Value: varies, but includes full tuition, registration fee, room and board etc. Awarded to qualified and deserving students from any country in Africa who intend to return to aid in their homeland's development upon graduation.

Type "B" Value: varies, but includes full tuition and registration fee. Awarded on the same conditions as Type "A".

The Loyola Bursary for the Blind:

Number: one. Value: full tuition for one year, renewable. To a blind student who is qualified to follow regular courses.

Touche Ross & Co. Bursary:

Number: one. Value: \$200.00. Awarded annually to a student who is completing his third year and will be entering his final year, majoring in Accountancy in the Faculty of Commerce, and who intends to pursue the qualification of Chartered Accountant.

The Birks Family Foundation Bursaries:

A limited number of bursaries are available under this plan. The student's financial need and academic standing will be considered in the granting of these bursaries. Apply to Director, Financial Aid.

B'nai B'rith Hillel Foundation:

A limited number of bursaries are available. Amount of each bursary granted from this fund may vary according to the need of any deserving student in any year or faculty. Apply to Director, Financial Aid.

National Council of Jewish Women of Canada, Montreal Section, Bursaries:

A limited number of bursaries are awarded by the Council upon the recommendation of the Financial Aid Director; academic standing and financial need are considered in making the award. Although there is no legal obligation, the Council hopes that the holder will, if possible, return the money at some future time, so that other students may be helped. Apply to the Director, Financial Aid.

Mr. and Mrs. Meier Segals Bursaries:

A number of bursaries are available through their generosity to needy students with good academic standing.

Canadian-Italian Business & Professional Men's Association:

Bursaries are awarded to students of Italian origin or descent by the Association. Apply to Mr. Dante Panni, President Trust Fund Committee. Forms available through the Financial Aid Office.

**Government
Loan Plans**

In all the Canadian provinces a basic qualification for financial aid is that the applicant be a Canadian citizen or a landed immigrant with one year's residence and domicile in the province to which he/she is applying.

The Province of Quebec has an extensive program of Student Loans and Bursaries available to students. For application write to: Student Loans and Bursaries Service, Department of Education, Quebec 4 Quebec.

Ontario — Department of University Affairs, 481 University Avenue, Toronto 101, Ontario.

New Brunswick — Department of Youth & Welfare, Fredericton, New Brunswick.

For the provinces of Newfoundland, Prince Edward Island, Nova Scotia, Manitoba, Saskatchewan, Alberta and British Columbia, write to the Provincial Department of Education.

United States Students:

Maine and Oregon — Apply through the United Student Aid Fund, Form 1070, available at your bank. Students from other of the United States — Apply to The Higher Education Assistance Corporation. Your bank has these application forms. Due to the tight money situation, it is essential to apply to the bank where your parents have an account.

NOTE: APPLICATIONS FOR GOVERNMENT AID SHOULD BE MADE AS SOON AS A STUDENT HAS BEEN ACCEPTED BY LOYOLA. DO NOT WAIT FOR REGISTRATION.

Loan Funds:

Through the generosity of The Birks Family Foundation Fund, the B'nai B'rith Hillel Foundation and the National Council of Jewish Women, Montreal Section, a certain amount of money has been placed with Loyola to help students in an emergency situation. Available, interest free, to all students who demonstrate need and responsibility. Apply to Director, Financial Aid.

The Loyola Alumni Student Loan Fund:

The Loan Fund exists to aid students who are in financial difficulties. Because of limited resources, the trustees of the fund normally will consider loans to students who: 1) have been successful in their set of final examinations at Loyola 2) are prepared to repay the loan by the end of the summer. Applications should be made in writing to: Loyola Alumni Student Loan Fund, Loyola of Montreal, 7141 Sherbrooke Street West, Montreal 262, before DECEMBER FIRST.

Physically Handicapped:

Students in any faculty who are Canadian citizens and have been resident and domiciled in Quebec for two years may apply for an outright grant if they have suffered from poliomyelitis, tuberculosis, certain forms of cardiac trouble, or some other physical disability. Apply to Director, Financial Aid.

Children of War Dead (Education Assistance) Act:

Under this Act fees up to \$800.00 and monthly allowances are provided for children of Canadian veterans whose death was attributable to military service in World War I, World War II or the Korean War. Apply to the Superintendent of Welfare Services at the nearest DVA District Office.

Loan Funds**Grants**

*Awards
and
Prizes*

Imperial Oil Higher Education Awards:

Imperial Oil Limited offers annually free tuition and other compulsory fees to all children or wards of employees and annuitants who proceed to higher education courses. The courses may be taken at any Canadian university or other approved institution of higher learning. Each award is tenable for a maximum of four years. To be eligible a student must attain an average mark of 70% or higher in the appropriate secondary school examinations in the subjects required for admittance to the approved institution, or must have attained an average of 70% or more in a college year upon which application is based. Further information and application forms may be obtained from the Secretary, Committee on Higher Education, Imperial Oil Limited, 111 St. Clair Avenue West, Toronto 7, Ontario.

The Governor-General's Medal. Presented by His Excellency the Governor-General of Canada to the outstanding student graduating with the highest overall average in the four years of Art.

The Minister of Education's Silver Medal. Presented by the Department of Education, Government of Quebec, to the student with the highest overall average in the four years of Science.

The Minister of Education's Silver Medal. Presented by the Department of Education, Government of Quebec, to the student with the highest overall average in the four years of Commerce.

The Loyola Engineering Medal. Presented by Loyola to the graduating student with the highest overall average in Engineering.

The Loyola C.O.T.C. Medal. Presented to the most representative student among the graduates.

The William H. Atherton Prize for History. Awarded to a student for outstanding research in Canadian History.

The Brodrick Award. Established in honour of Dr. Robert Brodrick, Arts '43 and awarded to the graduating student athlete who has distinguished himself in academic and extracurricular endeavours during his four years at Loyola.

The Dr. J. Leclerc Prize for Chemistry. Awarded annually to the student with the highest average for Chemistry subjects in University I.

The Chemcell Prize for Chemistry. Awarded to the student with the highest four year average in Chemistry subjects.

The Chemcell Prize for English. Awarded to the graduating student in Arts, taking a Major or an Honours in English, with the highest four-year average in English subjects.

The Pierre Desmarais Prize. Awarded to the student who has distinguished himself during his last year, by his contribution to non-academic activities.

The Economics Prize. Granted by Loyola to the graduating student in Arts or Commerce, taking a Major or an Honours in Economics, with the highest four-year average in Economics subjects.

The Evening Division Medal. Granted by Loyola to the student with the highest overall average in the Evening Division.

The French Language Prize. Donated by the Government of France and awarded to the graduating student who has shown the greatest progress in French language courses.

The German Language Prize. Donated by the Consulate General of the Federal Republic of Germany to the student who has shown the greatest progress in the German language course offered at Loyola College.

The Knights of Columbus Prize for Canadian History. Donated by the Knights of Columbus of the Province of Quebec to the student who has obtained the highest mark in Canadian History during the current academic year.

The Philosophy Gold Medal. Presented by Loyola to the outstanding graduate in philosophy and awarded on the recommendation of the Philosophy Department.

The Physics Prize. Granted by Loyola to the graduating student in Physics with the highest four-year average in Physics subjects.

The Society of Chemical Industry, Canadian Section, Merit Award, Chemistry. Presented to the highest ranking (over 75%) student in fourth year, majoring in Chemistry, Chemistry-Physics, or Chemistry-Mathematics, who has completed the course in the normal number of years.

The Dr. Jacques Smith Memorial Prize. Donated by Dr. Kurt Ekler in memory of Dr. Jacques Smith, a Loyola graduate who died suddenly in 1960 at the age of thirty-six, and awarded to the graduating student with the highest four-year aggregate standing in Pre-Medical studies.

The Spanish Language Prize. Donated by Vice-Admiral Wolfgang Larrazabal, Embajador de Venezuela to the student who has shown the greatest progress in the Spanish Language course offered at Loyola College.

Theology Medal. Presented by the Most Reverend Leonard J. Crowley and awarded to the graduating student who has been the most creative and productive in the field of Theology.

The Mme. Alfred Thibaudeau Prize for Political Science. Donated by Miss Madeleine Thibaudeau in memory of her mother and awarded to the graduating student with the second highest average in the field of Political Science.

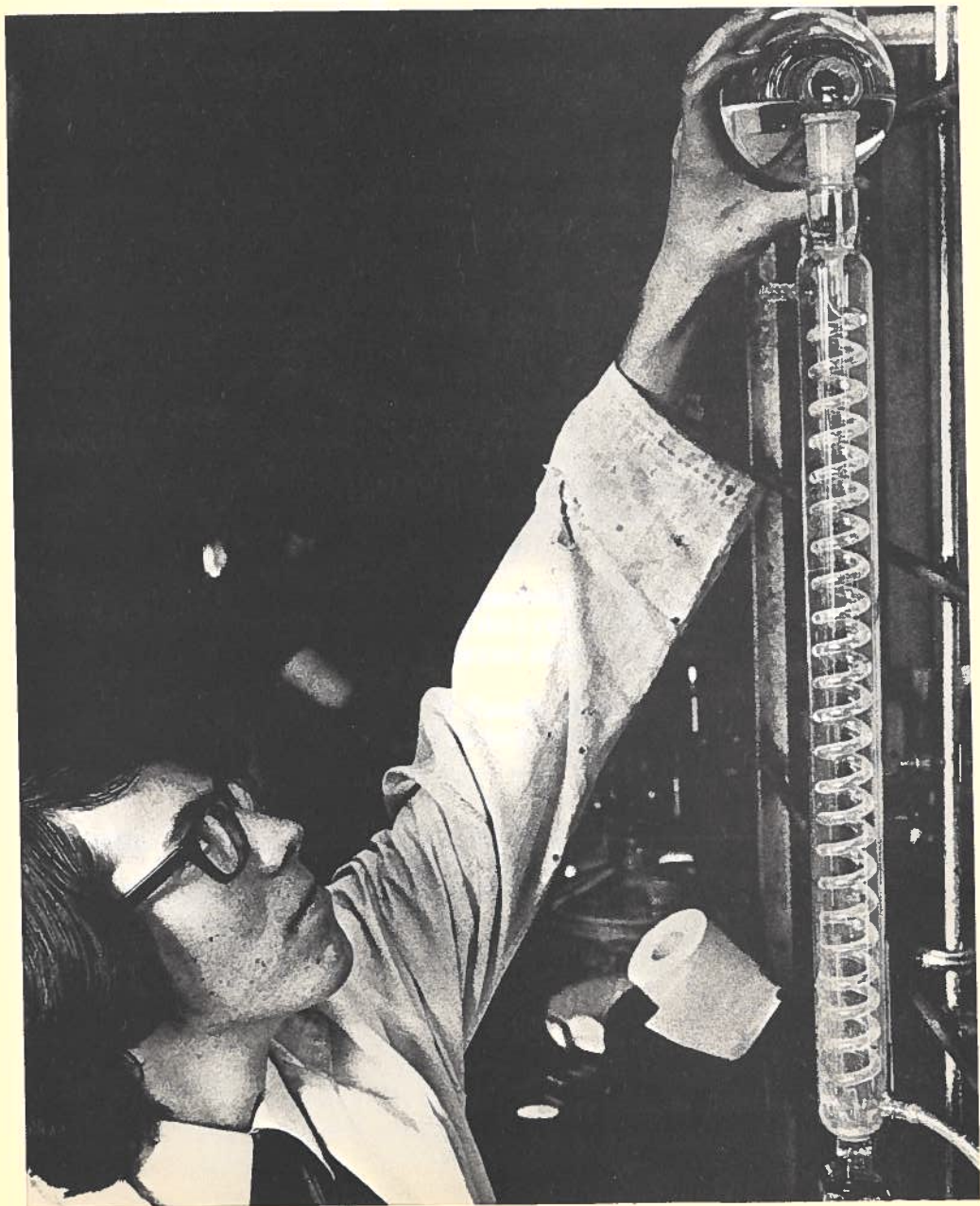
The Renee Vautelet Prize for Political Science. Awarded to the graduating student with the highest average in the field of Political Science.

The Michael Watson Prize. Donated by Loyola to honor the memory of Michael Watson, an outstanding, capable and popular member of the class of 1967, who met his death in a construction accident at the end of his third year, and awarded to the graduating student who has shown academic superiority in the study of Biology.

The Montreal Economic Association Prize. Donated by the Montreal Economic Association to the third year student taking an Honour or Major in Economics with highest three-year average in his economic courses.

The Chemical Institute of Canada. Donated by the Chemical Institute of Canada to the third year student taking an Honours in Chemistry with the highest average in his year.

Fellowships For GRADUATING STUDENTS interested in applying for fellowships, there are the Walter C. Sumner Memorial Fellowships (value \$4000 to \$5000) available. For further information consult Mr. R. P. Duder, Assistant to the President.



The University of Texas at Austin is a leading research institution in the United States. It is a member of the Association of American Universities and is ranked among the top 20 universities in the world. The university is known for its excellence in research, teaching, and public service. It has a long history of producing world-class scholars and leaders in various fields of study. The university's commitment to excellence is reflected in its high standards of academic achievement and its dedication to the advancement of knowledge and the betterment of society.

PROGRAMS OF STUDY

The University of Texas at Austin offers a wide range of programs of study for its students. These programs are designed to provide students with a solid foundation in their chosen field of study and to prepare them for careers in a variety of professions. The university's programs are known for their rigor and for the high quality of the education they provide. Students at the University of Texas at Austin can expect to receive a world-class education and to be well-prepared for the challenges of the future.

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FACULTY OF ARTS

The faculty of arts offers a suitable variety of programs to suit the needs and interest of all students.

An *Honours* programme offers an opportunity for deep and intensive study in an area. In most cases, students who wish to pursue graduate studies will need an honours degree. The Faculty of Arts offers honours programmes in Classics, Economics, English, French Studies, History, Philosophy, Political Science, Sociology and Theology.

A *Major* programme offers an opportunity for a solid preparation in an area. Students who intend to pursue elementary or high school teaching will need at least a major programme. The Faculty of Arts offers major programmes in Classics, Communication Arts, Economics, English, French, German, History, Italian, Modern Languages, Philosophy, Political Science, Psychology, Sociology, Spanish and Theology.

A degree with an *area of concentration* offers the students a less intense concentration in any given field and the opportunity for wider electives in other fields. Students interested in such areas of concentration may register with any department in the Arts Faculty.

Of special interest is the *self-elected major* in the Department of Interdisciplinary Studies. This major gives the student an opportunity to pursue those interests which transcend the usual departmental lines. Students interested in such a program should contact the Dean of Arts who is the Acting-Chairman of the Department of Interdisciplinary Studies.

Other students may find a *joint-major* programme best fits their needs. These are programmes which are developed by two or more departments to provide a different kind of preparation for the student. While further joint programmes are being designed, the following are available at present:

- Economics and Political Science
- German and Italian
- German and Russian
- German and Spanish
- German and Linguistics
- Italian and Russian
- Italian and Spanish
- Italian and Linguistics
- Spanish and Russian
- Spanish and Linguistics
- Russian and Linguistics

Double major programmes are available for students who wish to complete all requirements for majors degrees in two departments.

FACULTY OF COMMERCE

A Bachelor of Commerce degree has been available from Loyola since 1948. Initially offering studies with emphasis on Economics and Accountancy, it now includes the general area of Business Administration. Despite the requirement that students specialize in one of these three fields, the degree also includes an exposure in the humanities and social sciences.

Students in the Honours programme (Economics only) must maintain a yearly average of 65% and not less than 65% in any course in their field of concentration. In the new three year university programme (effective September 1971), all candidates must have a minimum of fifteen recognized academic credits to receive the degree. To graduate with a Bachelor of Commerce (Major) degree (in Economics, Accountancy and Business Administration), a student must satisfy the ordinary requirements for the degree and obtain an average of 65% for the courses in his chosen discipline. If a student fails to satisfy the specified average or fails any one of the courses in his chosen discipline, he will graduate with a general Bachelor of Commerce degree.

FACULTY OF ENGINEERING

The overall objectives of the Faculty of Engineering are the growth and development of the student into a self-identifiable person and the acquisition by him of the knowledge upon which to build his career. In the concrete, these goals are proposed to the student as a personal search for excellence and the forming of himself to manage industry, whether technically or administratively. While the subjects of the curriculum — technology, science, humanities, professional practice — have to be presented as discrete disciplines, the Faculty seeks at all times to make the student aware that he must integrate them into his personality so that they become the foundation for supporting his chief function in society — the making of decisions.

FACULTY OF SCIENCE

The courses for the two-year CEGEP parallel program can be found in the Collegial calendar.

The fourth year of the former 4-year course will be given for the last time in 1971-72. Students with special problems in completing the former B.Sc. program should consult their chairman.

In 1971-72 the first year of the revised 3-year university program will be introduced. This program is divided into three types as follows:

1. A B.Sc. program, designated a general course with concentration, designed for students who do not plan to continue their scientific training beyond the Bachelor Level. Offered by chemistry, geology, mathematics and physics.
2. A major program leading to a B.Sc. with greater concentration in the chosen field. Designed for students capable and willing to concentrate in a designated area, and who may, perhaps with the help of a qualifying year after graduation, continue to higher degrees. Offered in biology, chemistry, geology, mathematics, computer science, physics and psychology.
3. An honours program offered in the chemistry, geology, mathematics and physics departments. Those completing this exacting program usually proceed to graduate school and advanced degrees.

Honours students must maintain a yearly average that does not drop below 65% and obtain not less than 65% in each course of their field of concentration.

It should be noted (a) that the student load in the above programs varies in quantity rather than quality, (b) the programs have been arranged with increasing work loads to permit students to obtain good marks in the courses in which they are registered; failure to maintain a satisfactory standard will result in the student being asked to drop to a less concentrated program, (c) each department is responsible for deciding the category which a student may enter and in which he may continue; no student may claim a right to proceed in a program against the judgment of the department concerned.

ACCOUNTANCY

ACCOUNTANCY

Department Chairman

L.J. Boyle

Courses leading to a B. Comm. with a Major in Accountancy.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Accounting 300	Accounting 402	Accounting 503A/505B
Business 308	Accounting 408	Accounting 507B
Elective	Business 408	Accounting 508
Elective	Elective	Business 502
Elective	Elective*	Elective (Half Course)
		Elective*

* These electives may have to be taken from a specified list of courses approved by Senate.

The fourth year of the old Accounting Programme will be found on page 274 f.

The Institute of Chartered Accountants.

Students holding the Bachelor of Commerce degree with a Major in Accountancy from Loyola of Montreal at the time of registering with The Institute of Chartered Accountants of Quebec, may apply for exemption from up to three of the five years of training and course work required for the C.A. certificate. Certain of the courses taken at Loyola may be substituted for Institute courses normally offered in the last two years of the Institute programme; however, a minimum of two years employment by a practicing firm of Chartered Accountants is required before entitlement to the C.A. designation. Further information may be obtained from the Chairman of the Department of Accountancy.

The Society of Industrial Accountants.

Students holding a Bachelor of Commerce degree with a Major in Accountancy from Loyola of Montreal at the time of registration with The Society of Industrial Accountants of Quebec, are usually granted exemptions from a large proportion of the Society's course work leading to the R.I.A. certificate. Further information may be obtained from the Chairman of the Department of Accountancy.

300

Introductory Accounting. Full Course.

Introduction to accounting concepts and procedures; financial and managerial accounting.

Required for all Commerce Students.

Lectures: 3 hours per week for two terms.

310 Management — An Accounting Approach. Full Course.

This is an optional course available to students in the Faculties of Arts, Science and Engineering. It is designed to cover some of the major aspects of management, including business organization, accounting concepts, financial statement analysis, management uses of accounting information, and taxation. Cases will be used to illustrate some of the above areas.

Prerequisite: Business 312.

Lectures: 3 hours per week for two terms.

402 Management Accounting. Full Course.

This course is designed to develop, through verbal and written analyses of managerial control cases, understanding and skill in the use of financial data in business. An examination is made of current standards of financial reporting, but emphasis is placed on the internal use of such data as a basis for managerial decisions.

Prerequisite: Accounting 300.

Lectures: 3 hours per week for two terms.

408 Advanced Financial Accounting. Full Course.

Emphasizes specialized areas, particularly those related to business combinations.

Prerequisite: Accounting 402.

Lectures: 3 hours per week for two terms.

503A Cost Accounting. Half Course.

The development and interpretation of cost accounting information as a tool of business management.

Prerequisite: Accounting 402.

Lectures: 3 hours per week, first term.

505B Taxation. Half Course.

The Canadian taxation structure is examined with particular emphasis on theoretical and practical problems in the areas of individual and corporate income taxes.

Prerequisite: Accounting 402 or departmental approval.

Lectures: 3 hours per week, second term.

507B Financial Accounting. Half Course.

Development of financial accounting theory: asset valuation and revaluation; asset expiration; current and long-term debt; share capital and surplus; financial statement classification and presentation; C.I.C.A. handbook and Canada Corporations Act.

Prerequisite: Accounting 300.

Lectures: 3 hours per week, second term.

508 Auditing and Investigations. Full Course.

Introduction to auditing: independence; internal control and flow charting; evidence; audit programmes; procedures for verification of items in financial statements; the audit report; legal considerations; investigations. The case method is used in certain areas of the course.

Prerequisite: Accounting 408 or departmental approval.

Lectures: 3 hours per week for two terms.

509 Accounting Theory. Half Course.

(Not offered 1971-72)

A discussion of the framework of theory underlying current accounting thinking and procedures: a study of the development and the influence of professional organizations in this development. Areas of theoretical controversy are emphasized.

Prerequisite: Accounting 408

Lectures: 3 hours per week.

BIOLOGY

Department Chairman

S.P. Drummond, S.J.

Courses leading to a B. Sc. with a Major in Biology. (a)

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Biology 310	one of: Biology 410	Biology 530
Biology 320	Biology 420	two of: Biology 510
one of: Biology 331	Biology 430	Biology 520
Biology 333	two of: Biology 431	Biology 522
Chemistry 326	Biology 433	Biology 524
Mathematics 301	Physical Chemistry	Biology 532
Elective	Bioorganic Chemistry	Biology 534
	Carbohydrates and Proteins	Elective
	Molecular Biochemistry	
	Elective*	Elective*

(a) University I will be introduced in 1971-72, University II in 1972-73 and University III in 1973-74.

* These electives may have to be taken from a specified list of courses approved by Senate.

The fourth year of the old Biology Programme will be found on page 274 f.

300 Fundamentals of Biology. Full Course.

S.P. Drummond, S.J.

A series of lectures and demonstrations offered as an elective for those not intending to continue in Biology. The course provides a general survey of the fundamental principles of life, with special emphasis on the structure and function of man. There are no prerequisites for the course.

Lectures: 3 hours per week for two terms.

310 General Botany. Full Course.

A study of the principles of structure, function and development in a selected series of avascular and vascular plants.

Prerequisite: Biology 230, or its equivalent.

Lectures: 2 hours per week for two terms.

Lab: 3 hours per week for two terms.

320 General Zoology. Full Course.

K.S. Dhindsa

A study of the principles of structure, function and development in a selected series of invertebrate and vertebrate animals.

Prerequisite: Biology 230, or its equivalent.

Lectures: 2 hours per week for two terms.

Lab: 3 hours per week for two terms.

331 Environmental Biology. Half Course.

K.S. Dhindsa

A detailed survey of important aspects of ecology and environmental Biology, with emphasis on new developments and modern methods of analysis.

Lectures: 3 hours per week, first term.

333 Environmental Biology. Half Course.

K.S. Dhindsa

A further development of Biology 331 for those students who wish to pursue the problem in greater depth.

Lectures: 3 hours per week, second term.

406 Histology. Half Course.

S.P. Drummond, S.J.

(Not offered after 1971-72)

An introductory study of the cell and the general tissues. The course is designed to explain in detail the structure and function of the basic tissues and to introduce the various combinations of these in the special tissues of the adult body.

Lectures: 2 hours per week, second term.

Lab: 3 hours per week, second term.

408 Genetics. Half Course.

R.T. Cronin, S.J.

(Not offered after 1971-72)

Theory. A series of lectures designed to explain the principles of heredity and variation, the classical and modern concept of the gene, DNA, RNA and the genetic code, developmental and population genetics, and eugenics.

Lectures: 2 hours per week, first term.

Lab: 3 hours per week, first term.

BIOLOGY

410	Advanced Botany.	Full Course.	(to be offered in 1972-73)
420	Advanced Zoology.	Full Course.	(to be offered in 1972-73)
430	General Genetics.	Full Course.	(to be offered in 1972-73)
431	Cell Biology.	Half Course.	(to be offered in 1972-73)
433	Cell Biology.	Half Course.	(to be offered in 1972-73)
510	Microbiology.	Full Course.	(to be offered in 1973-74)
520	Embryology.	Full Course.	(to be offered in 1973-74)
522	Histology.	Full Course.	(to be offered in 1973-74)
524	Neurophysiology.	Full Course.	(to be offered in 1973-74)
530	General Physiology.	Full Course.	(to be offered in 1973-74)
532	Advanced Genetics.	Full Course.	(to be offered in 1973-74)
534	Radiation Biology.	Full Course.	(to be offered in 1973-74)

BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION

Department Chairman

L.J. Boyle

Courses leading to a B. Comm. with a Major in Business Administration.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Accounting*	Business 470	Business Elective
Business 308	Business 408	Elective
Business 320	Business 414	Elective
Elective	Elective	Elective
Elective	Elective**	Elective**

* It is presumed that students will have taken an introductory course in Accounting in their CEGEP curriculum. If not, they will be required to correct this deficiency in University I and carry over a second Accounting course to University II.

** These electives may have to be taken from a specified list of courses approved by Senate.

The fourth year of the old Business Administration Programme will be found on page 274 f.

300 Mathematical Analysis for Management. Full Course.

An introduction to differentiation and integration of Algebraic functions of a single variable and to Matrix Algebra. The application of these techniques to business problems is discussed.

Prerequisite: Mathematics 101.

Lectures: 3 hours per week for two terms.

308 Business Statistics. Full Course.

This course is designed to acquaint the student with statistical methods applicable to business. Curve fitting, variation, correlation and regression are included.

Lectures: 3 hours per week for two terms.

312 Introductory Business Analysis. Full Course.

This is an optional introductory business course available to students in the faculties of Arts, Science, and Engineering. It is designed to cover some of the major aspects of business, including financial statement preparation and analysis, finance, investment management, marketing and organizational behaviour.

Lectures: 3 hours per week for two terms.

320 Marketing Management. Full Course.

An introduction to the nature and scope of the marketing manager's job. Lectures and case studies indicate how customer wants are studied in order to isolate marketing opportunities, and how firms attempt to combine products, pricing, promotion and distribution to take advantage of these opportunities.

Lectures: 3 hours per week for two terms.

408 Finance. Full Course.

A study of the corporate investment in assets and the sources of funds available to finance this investment. Emphasis is placed on long term financing. Extensive use is made of case material.

Prerequisite: Accounting 300.

Lectures: 3 hours per week for two terms.

414 Administrative Practices. Full Course.

The objective of this course is to increase the student's awareness of individual behaviour, interpersonal relationships and group dynamics as they influence the organization. The course will include lectures, group discussions and case material.

Lectures: 3 hours per week for two terms.

470 Production Management. Full Course.

The course is designed to introduce students to the fields of production management. It focuses through the use of case problems on the design and operation of production systems and on quantitative techniques that are relevant to the manufacturing process.

Lectures: 3 hours per week for two terms.

502 Commercial Law. Full Course.

Laws of contracts, sales agency, partnerships, company law and negotiable instruments.

Lectures: 3 hours per week for two terms.

505A Human Relations. Half Course.

This course is designed as an extension of Business 414. In the first part of the course the emphasis will be on developing interpersonal abilities, in the second, a comprehensive examination of existing organizational theory will be undertaken.

Prerequisite: Business 414 with a "B" average, or departmental approval.

Lectures: 3 hours per week, first term.

509A Administration of the Firm. Half Course.

(Not offered 1971-72)

An introduction to the basis of management through a study of principles and a brief inquiry into the major foundations of management authority and responsibility. The managerial functions of planning, organizing, staffing, direction and control are analyzed and described. Extensive use is made of cases.

Lectures: 3 hours per week, first term.

511B Business Policy. Half Course.

(Not offered 1971-72)

This course is designed to acquaint fourth year students with major issues of company policy as they confront top management of the enterprise. It is intended to give some experience through analysis of general management cases, in diagnosing problems and formulating policies and programs of action.

Departmental approval is required for registration in this course.

Lectures: 3 hours per week, second term.

518 Operations Analysis. Full Course.

A study of operations research techniques such as queueing theory, inventory theory, linear programming and the Monte Carlo method, and the application of these to marketing, production and administrative problems.

Prerequisite: Business 300 and Business 308.

Lectures: 3 hours per week for two terms.

521A Sales Management. Half Course.

This course deals with (1) the principles and policies of sales organization and some typical sales organization structures; (2) sales operation, including such topics as selecting, training, compensating, supervising and stimulating salesmen; (3) sales planning, including such tasks as determining sales and market potentials, forecasting sales, preparing sales department budgets and establishing territories and quotas; (4) an analysis of sales operation and evaluation of salesmen's productivity and effectiveness.

Prerequisite: Business 320

Lectures: 3 hours per week, first term.

523B Advertising Management. Half Course.

A general introduction to the field of advertising through lectures and case discussion. The advertising function and how it relates to marketing; history, function and purpose; agency revenues and how they are derived; agency organization and client relationships; campaign planning, copy writing and advertising art; media planning and execution; print and broadcast production; marketing and advertising research; publicity; public relations, sales promotion and merchandising; accounting and cost control; billing methods; the future of advertising and its role in the economy.

Prerequisite: Business 320
Lectures: 3 hours per week, second term.

530 Investment Management. Full Course.

This course is designed to develop an understanding of the operations of major financial markets as well as the methods used in the evaluation of the various types of securities. A major portion of the course is devoted to the principles of portfolio management.

Prerequisite: Business 408.
Lectures: 3 hours per week for two terms.

541B Advanced Financial Management. Half Course.

This course is designed as an extension of Business 408. Advanced techniques of financial analysis are studied and discussion of current financial literature is an integral part of the course. Comprehensive cases are analyzed in detail.

Prerequisite: Business 408; to qualify for admission to this course a "B" average in Business 408 is required.
Lectures: 3 hours per week, second term.

551B Marketing Research. Half Course.

The objective of this course is to train students in the use of marketing research techniques. The place of research in the marketing process, the role of models and the development of measurements are discussed. Emphasis is placed on planning and executing marketing studies and on the applications of marketing research.

Prerequisite: Business 320.
Lectures: 3 hours per week, second term.

CHEMISTRY

Department Chairman

M. Doughty

Courses leading to an Honours B. Sc. in Chemistry.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Chemistry 312	Advanced Organic 422	Organic Lab. or Phys. Chem. Lab.
Chemistry 322	Physical Chem. 432	Senior Thesis 551
Chemistry 336	Analytical Chem. 442	Electrochemistry 531
Chemistry 342	Physics	Physical Chem. 532
Mathematics 332	Computer Science	
	Physical Chem. Lab. 431	Chemistry Electives
Elective	Elective*	Non-departmental Elective
		Elective*

Courses leading to a B. Sc. with a Major in Chemistry.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Chemistry 312	Advanced Organic Chem. 422	Physical Chem. Lab. 431
Chemistry 321	Analytical Chem. 442	Physical Chem. 432
Chemistry 322	Computer Science	Chemistry Electives
Chemistry 342	Physical Chem. 336 or	Non-departmental Electives
Mathematics 332	Two Chemistry Electives	
Chemistry 231 or 336	Industrial Chem.	Elective*
Elective	Elective*	

Courses leading to a B. Sc. in Chemistry.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Chemistry 312	Physical Chem. 336	Industrial Chemistry
Chemistry 231	Analytical Chem. 342	Analytical Chemistry 442
Chemistry 326		
Mathematics 332	Two Chemistry Electives	Non-Departmental Electives
Computer Science	Non-Departmental Elective	
		Chemistry Electives
Elective	Carbohydrates or	
	Biochemistry	Elective*
	Elective*	

* These electives may have to be taken from a specified list of courses approved by Senate.

The fourth year of the old Chemistry Programme will be found on pages 274 f.

NEW PROGRAMME: The University I, II and III programmes outlined above will be followed by those students entering University I in 1971. Immediately below are printed brief course descriptions for University I. Course descriptions for University II and III (1972-73 and 1973-74) will be given in next year's calendar.

- 231 Physical Chemistry. Half Course.** K. Ekler
See Collegial Programme for description. Those entering the University Chemistry programme without having completed a course in physical chemistry at Loyola College or elsewhere, will be required to take this course.
Prerequisite: Chemistry 112.
Lectures: 3 hours per week, first or second term.
- 312 Inorganic Chemistry and Valence Theory. Full Course.** R.H. Pallen
Atomic and Molecular Structure, Valence, Coordination, Periodicity.
Prerequisite: Chemistry 112.
Lectures: 3 hours per week for two terms.
- 321 Organic Chemistry. Supplementary. Half Course.** M. Doughty
This course will be taken in conjunction with Chemistry 322. It is designed for those students who have taken no organic chemistry in their Collegial or CEGEP studies.
Lectures: 3 hours per week, first term.
- 322 Organic Chemistry. Full Course.** T. Nogrady
An intermediate course in organic chemistry treated substantially from a mechanistic point of view. It is to be regarded as the first half of a four-term programme in organic chemistry.
Prerequisite: Chemistry 221 (but see Course 321 above).
Lectures: 3 hours per week for two terms.
Lab: 3 hours per week, second term.
- 326 Organic Chemistry. Full Course.** M. Doughty
A general organic course which will presume little previous knowledge of carbon chemistry.
Prerequisite: Chemistry 112.
Lectures: 3 hours per week for two terms.
Lab: For students taking a General Degree in Chemistry and biologists.
3 hours per week for two terms.
- 336 Physical Chemistry. Full Course.** G.J. Trudel
Prerequisite: Chemistry 231.
Lectures: 3 hours per week for two terms.

- 342 Analytical Chemistry. Full Course.** G.J. Trudel, R.H. Zienius
Gravimetric and Volumetric analysis. Acid-base and oxidation-reduction-titrations. Theory of precipitation and complex formation analysis. Introduction to instrumental analysis.
Prerequisite: Chemistry 112.
Lectures: 3 hours per week for two terms.
Lab: 3 hours per week for two terms.

OLD PROGRAMME: Immediately below are printed course descriptions for University IV of the old programme.
- 313 Instrumental Analysis. Full Course.** R.H. Zienius
A study of modern instrumental methods in inorganic and organic analysis. Electro-chemical absorption, optical and radio-chemical methods, mass spectrometry, chromatography, NMR and X-ray diffraction are discussed.
Prerequisite: Chemistry 212, 221, 231.
Lectures: 2 hours per week, first term.
Lab: 3 hours per week, second term.
- 324 Identification of Organic Compounds. Full Course.** M. Baldwin
Theory and practice of organic qualitative analysis, most of the laboratory time is given to the identification of unknown compounds and the separation and identification of a simple mixture.
Prerequisite: Chemistry 222.
Lectures: 1 hour per week for two terms.
Lab: 3 hours per week for two terms.
Text: Shriner, Fuson and Curtin, *The Systematic Identification of Organic Compounds*, Wiley.
- 332 Chemical Thermodynamics. Full Course.** K. Ekler
As a second course of Thermodynamics. The first and second laws are expanded axiomatically leading to a thorough treatment of activity relationships; Substantial application is made in the behaviour of gases, solutions and chemical equilibrium. Further applications arise in the subsequent Chemistry 333.
Lectures: 2 hours per week for two terms.
- 333 Advanced Physical Chemistry. Full Course.** D. McElcheran
Succeeds Chemistry 332 with analysis of the states of matter based largely on phase rule. The elements of classical statistical mechanics. Surface chemistry and the colloidal state. Reaction kinetics emphasizing catalysis.
Lectures: 2 hours per week for two terms.

425 Organic Chemistry Theory. Full Course.**T. Nogrady**

An advanced study of physical organic chemistry and stereochemistry. The electron theory of reaction mechanisms such as nucleophilic aliphatic substitution, elimination and addition reaction, aromatic substitution, free radical mechanisms, are discussed in depth. Modern concepts of stereochemistry and conformational analysis are also covered.

Prerequisite: Chemistry 323.

Lectures: 2 hours per week for two terms.

Texts: R. Breslow, *Organic Reaction Mechanisms*, Benjamin. K. Mislow, *Introduction to Stereochemistry*, Benjamin. Reference: Smith and Cristol, *Organic Chemistry*, Reinhold.

426 Organic Preparation Laboratory 1. Half Course.**T. Nogrady**

The student performs modern multi-step synthesis and is expected to become proficient in such techniques as vacuum distillation, catalytic hydrogenation, high pressure reactions and the judicious use of instrumental methods like IR and NMR spectroscopy and chromatographic methods.

Prerequisite: Chemistry 222, 324.

Lab: 6 hours per week, second term.

Text: Feiser: *Organic Experiments*, Raytheon.

435 Advanced Physical Chemistry Laboratory. Half Course.**D. McElcheran**

A continuation of Chemistry 333, but fewer and more demanding experiments.

Prerequisite: Chemistry 333.

Lab: 4 hours per week for one term.

436 Electrochemistry. Half Course.**K. Ekler**

Electrolytic conduction and electrolysis: Faraday's laws; specific and equivalent conductance and measurement of conductance; mobility and transport number; theory of strong electrolytes; thermodynamics of cells; electrode potentials; concentration cells; liquid junction potentials; overvoltage and polarization phenomena.

Prerequisite: Chemistry 332, 334.

Lectures: 1 hour per week for two terms.

437 a) Quantum Chemistry, b) Kinetics. Full Course.**D. McElcheran**

a) Mathematical foundation; elements of: Vectors, complex variable, matrices, group theory. The Schrodinger Equation and the particle-in-the-box, harmonic oscillator, rigid rotator and H-atom, problems. Perturbation theory applied to: atoms-atomic spectra. Molecules-v.b.; m.o., ligand-field theory, molecular spectra.

b) Statistical Mechanics and Chemical Kinetics. Quantum statistics – selection of thermodynamic problems. Gas phase kinetics. Absolute rate theory, unimolecular reactions, free radical mechanisms, chain mechanisms. Individual tutorials in problem solving approximately once a month.

Lectures: 3 hours per week for two terms.

450 Senior Thesis. Half Course.**Staff**

The Department will make available to selected students a senior thesis in Organic or Physical Chemistry to be done in the second term.

Lab: 6 hours per week, second term.

CLASSICS

Department* Chairman

J.E. Lemkowski

The Department of Classics offers courses leading to the Bachelor of Arts and to the Honours Bachelor of Arts degrees in two different programmes. The programme in CLASSICAL PHILOLOGY, requiring linguistic competence in both Greek and Latin, emphasizes the aesthetic appreciation of the masterpieces of classical literature. The programme in CLASSICAL STUDIES, which does not require a knowledge of the languages, is directed toward broader considerations of societal problems arising from the "living past". The Department also has courses in ANCIENT HISTORY and ARCHAEOLOGY. These are ordinarily taken by students registered in the Department of History and are cross-listed as history courses. It is understood, of course, that the requirements and regulations of the Department of History are then applicable.

Any course offered by the Classics Department may be taken by any qualified student as an ELECTIVE.

Provided all the general requirements for graduation are fulfilled, students registered in the Department of Classics, in either one of its two programmes, can qualify for the B.A. degree after successfully completing seven courses. The Honours degree is awarded to those students who will have completed nine courses in either programme with an over-all average of at least 65%. What specific courses a student takes is to be decided upon by the student himself together with the department chairman, in consultation with the other members of the department.

Honours Courses

All courses may be taken as honours courses. In some cases only students in an honours programme will be ordinarily permitted to register for a specific course in any given term; in other cases, i.e., whenever a course is open to all students, students in an honours programme will meet with the professor for tutorial sessions in addition to regularly scheduled classes. All students registered for a programme in Classics must consult with the department chairman before registering for any given course in the department.

Note: Two electives may have to be taken from a specified list of courses approved by Senate.

The fourth year of the old Classics Program will be found on pages 274 f.

COURSES IN CLASSICAL PHILOLOGY

390 Elementary Latin. Full Course.

Mrs. B. Wardy

A course for those with no or little experience with Latin. Major emphasis will be placed on assisting the student in acquiring a reading command of the language.

Lectures: 3 hours per week for two terms.

392 Latin Literature. Full Course.

Mrs. B. Wardy

Cicero's *Pro Archia*, selections from Catullus and the *Odes* of Horace.

Prerequisite: Junior Matriculation Latin or its equivalent.

Lectures: 3 hours per week for two terms.

394 Cicero's *Pro Lege Manilia*, and Books 2, 4 and 6 of the *Aeneid*.

Prerequisite: Classics 392.

Lectures: 3 hours per week for two terms.

396 Elementary Greek. Full Course.

A course for those with no previous knowledge of Greek. Major emphasis will be placed on assisting the student in acquiring a reading command of the language.

Lectures: 3 hours per week for two terms.

398 Intermediate Greek. Full Course.

Further work toward the acquisition of a reading command of the language. Plato's *Apology* and *Crito*.

Prerequisite: Classics 396

Lectures: 3 hours per week for two terms.

400 Greek Literature. Full Course.

R. Russo

Demosthenes' *Philippics* and Euripides' *Alcestis*.

Prerequisite: Classics 398

Lectures: 3 hours per week for two terms.

402 Plato: *The Republic*. Full Course.

Prerequisite: Classics 398

Lectures: 3 hours per week for two terms.

404 Lucretius. Full Course.

Prerequisite: Classics 394

Lectures: 3 hours per week for two terms.

406 Livy and Tacitus. Full Course.

Mrs. B. Wardy

Extensive readings from Livy, Books 21-30, and the *Annales* of Tacitus, with particular attention to the Latinity peculiar to each historian.

Prerequisite: Classics 394.

Lectures: 3 hours per week for two terms.

CLASSICS

- 412 Herodotus and the Lyric Poets. Full Course.** R. Russo
Prerequisite: Classics 400.
Lectures: 3 hours per week for two terms.
- 414 Homer. Full Course.** D. Brown
Extensive readings from the two epics in Greek; both works in their entirety in English.
Prerequisite: Classics 400.
Lectures: 3 hours per week for two terms.
- 502 Roman Comedy. Full Course.** Mrs. E. Preston
Prerequisite: Classics 394.
Lectures: 3 hours per week for two terms.
- 504 Roman Satire. Full Course.** J.E. Lempkowski
Prerequisite: Classics 394.
Lectures: 3 hours per week for two terms.
- 506 Cicero. Full Course.** R. Russo
Careful examination of selections from the oratorical and philosophical works.
Prerequisite: Classics 394.
Lectures: 3 hours per week for two terms.
- 512 Greek Tragedy. Full Course.**
Aeschylus' *Agamemnon*, Sophocles' *Oedipus Rex*, Euripides' *Hippolytus*.
Prerequisite: Classics 412.
Lectures: 3 hours per week for two terms.

COURSES IN CLASSICAL STUDIES

- 476 Myth and Mythmaking. Full Course.** Mrs. B. Wardy
An examination of the universal features of myth. Recurrent patterns of myth in primitive cultures (Asio-Indian, American-Indian, Insular Pacific, Celtic, etc.). Near Eastern Mythologies (Mesopotamia, Ugarit). Mythological remains in the Old Testament and post-biblical Jewish literature. Major classical myths on the origin of the gods, the feats of heroes and the adventures of mortals in Homer, Hesiod the Greek Tragedians, the Platonic Dialogues, Ovid, Homer, and the Bible.
Lectures: 3 hours per week for two terms.

CLASSICS

- 478 Interrelation of Judaism and Hellenism. Full Course.** Mrs. B. Wardy
The impact of Hellenism on Jewish beliefs and institutions.
Part A. Representative texts of Hellenized Jewish literature created in Judea and other post-biblical centers (the four Books of the Maccabees, The Book of Esther, The Book of Judith, Ecclesiastes, The Book of Job, The Wisdom of Solomon, The Letter of Aristeas, The Septuaginta, Philo of Alexandria, Josephus).
Part B. Jewish Community and Greek City. Political-social aspects of the Jewish-Greek rapprochement. Alexander the Great and Judea. Greek historians on Jewish religion; "The Jewish Question" in Alexandria. The origin of antisemitism. Philo Iudaeus and Josephus as apologists. Civic rights and Jewish privileges under Roman rule. The extent of the interplay of Judaic and Hellenic cultures in Western society.
Independent investigations together with open and critical discussions in class.
Lectures: 3 hours per week for two terms.
- 480 Themes and Transformations: The Classical Background to Western Literature. Full Course.** R. Russo
The direct influence of Greek and Latin literature on European literature. Imitations and versions of classical literature. Influence of classical genres on their later development and transformations. The "lost child" and revenge.
Lectures: 3 hours per week for two terms.
- 482 The Greek and Roman Novel: Romance and Satire. Full Course.** R. Russo
Reading and discussion of selected works of prose fiction among them *The Satyricon*, *The Golden Ass*, *Daphne and Chloe*, *An Ephesian Tale*. Discussion will focus on the structure, characterization, narrative technique, atmosphere, and purpose of each work. Considered as well will be that element in each work that is most prominent – the pastoral, utopian, erotic, or satirical.
Lectures: 3 hours per week for two terms.
- 484 Greek Drama: Theatre and Democracy in Fifth Century Athens. Full Course.** Mrs. E. Preston and J.E. Lempkowski
The course is essentially a study of the literary and artistic merits of the tragedies of Aeschylus, Sophocles, and Euripides, and the comedies of Aristophanes. The ritual origins of drama, mythical sources, and the growth of the dramatic form. Greek Theatre as an expression of Athenian democracy. The historical importance of the plays insofar as they reflect the origins and evolution of the democratic movement in Athens. Social and political conditions reflected in the plays, involving problems of universal concern, e.g. Man and Fate, Man and Woman, Man the "Political Animal", Man and Identity, Man the Empire-BUILDER, Man the War-Maker and the Peace-Maker.
Lectures: 3 hours per week for two terms.

COURSES IN HISTORY AND ARCHAEOLOGY

The Department of Classics, by arrangement with the Department of History, offers university-level courses in Ancient History and Archaeology. These courses may be taken as either Classics or History courses and are listed as course offerings by both Departments. A seminar course in Ancient History for honours students in either Department is given each year on some specific period or problem in Ancient History. The subject matter is different each year.

The Archaeology course is intended primarily for honours students. Permission of the instructor is required before a student may register.

The Ancient World is a general course open to all university-level students. Students in honours programmes desiring to take this course must obtain the permission of the Chairman of the Department in which they are registered.

372 Man Before History. Full Course.**Staff**

The importance of prehistory to our understanding of man and his works. The Stone Ages and prehistoric man. Theories of evolution. Jericho, Mohenjo-daro, Stonehenge, Great Zimbabwe. Prehistoric cultures existing today.

Seminar: 2 hours per week for two terms.

450 The Ancient World. Full Course.**Mrs. B. Wardy**

After a preliminary consideration of the early civilization of Mesopotamia, Egypt, India and China, the course concentrates on the history of ancient Greece and Rome, with special attention to those institutions, theories, and discoveries that have most influenced our own time.

Lectures: 3 hours per week for two terms.

460 An Introduction to Archaeology. Full Course.**J.E. Lempkowski**

Archaeology as a science; its purpose, methods, and techniques. The relation of Archaeology to Pre-History, Ancient History, Fine Arts, and Anthropology. While the course will deal principally with Classical Archaeology and Greek and Roman Art, the Archaeology of Africa, the Orient, and the Americas will also be considered.

Lectures: 3 hours per week for two terms.



COMMUNICATION ARTS

Department Chairman**John E. O'Brien, S.J.**

OBJECTIVES OF THE DEPARTMENT.

The Department bases its work in communication theory and research, cinema, radio, and television on a solid foundation in the liberal arts.

The curriculum is intended to develop in students a scholarly and creative approach to mass media. It is designed:

1. for students who intend to continue graduate studies in communication;
2. for students who intend to make a career in the public arts as writers, critics, communication consultants, directors, and performers;
3. for students who wish to enter the teaching profession as specialists in film and television education;
4. for students who intend to enter the media industries, the media professions, and the public arts in the areas of publicity, promotion, advertising, and public relations.

FACILITIES

The Department has one professionally-equipped television-film studio with 3 Plumbicon cameras, telecine chain, and video tape recorder, 2 professionally-equipped radio studios and control rooms, 2 film-editing rooms, 1 darkroom, 1 multi-media room and 1 graphics room.

DEADLINE FOR APPLICATION TO THE DEPARTMENT – MAY 1st

A. REQUIREMENTS FOR A B.A. WITH A MAJOR IN COMMUNICATION ARTS FOR STUDENTS ENROLLED IN THE DEPARTMENT ON September 15, 1970.

2 English, 2 French, 2 Classics, 2 Philosophy, 2 Theological Studies, 7 Communication Arts (of which 5 are full courses in theory and 2 are in production labs.) and 4 free electives outside the Department.

COURSES FROM THE FORMER 4-YEAR PROGRAM WHICH WILL BE OFFERED IN 1971-1972.

- 270 Fundamentals of Radio Production I. Half Course. First Term. Lab. B. Brenn**
This course is designed to give students (1) a working knowledge of all the basic elements involved in the production of a radio program, (2) practical creative experience in the production of the simpler formats for radio and (3) practice in voice control and basic announcing techniques. Discussions are based on experiments in communicating ideas through the use of sound.
Lectures: 3 hours per week, first term.
- 275 Fundamentals of Radio Production II. Half Course. Second Term. Lab. B. Brenn**
A continuation of Part I, the course explores the creative possibilities inherent in fairly complicated programming and experiments with sportscasts, words and music shows, magazine shows, classical music programs, documentaries and dramas. All programs are recorded for playback and discussion.
Prerequisite: Course 270
Lectures: 3 hours per week, second term.
- 320 Communication by Speech. Full Course. G. Valaskakis**
A survey course in oral communication, this course is designed to give the student knowledge of and experience in speech situations with radio, television, and "live" audiences. Students will analyze, prepare, and deliver speeches of various types and will participate in interviews, group discussions, and dramatic readings. Course includes some study of voice and movement.
Lectures: 3 hours per week for two terms.
- 330B. The Silent Cinema. Half Course. First Term. M. Gervais, S.J.**
A history of the Silent Cinema in its feature films, tracing the growth of the art form from its earliest days through the great works (e.g., Griffith, Stroheim, the American comics, the Scandinavian mystics, the German expressionists and realists, the Russian Revolutionaries, etc.) The over-all human dimension of these artistic works will be examined as well as the more strictly aesthetic preoccupations of their creators.
This course is given each year, on a two-year cyclic basis:
1970-71: Unit A, with particular emphasis on the Americans: e.g., Griffith, Chaplin, Keaton the comics, Stroheim, etc.
1971-72: Unit B, with particular emphasis on the Russians (Eisenstein, Pudovkin, Bovzenko), the Germans (Lang, Murnau, Pabst, etc.), the Scandinavians, and others.
2-1/2 hours per week — screening, discussion
1-1/2 hours per week — analysis, discussion

- 335B. The Talkies. Half Course. Second Term. M. Gervais, S.J.**
A history of the feature talkies, tracing the development of the film art form and concentrating on the classics and leading genres, stressing these films in their over-all human dimensions and in their more strictly aesthetic perspectives.
This course is given each year, on a two-year cyclic basis:
1970-71: Unit A, with particular emphasis on the Americans: great individual directors such as Ford, Welles, Hitchcock, and others, and a study of the Hollywood filmic genres: the musical (Busby, Berkley, Astaire), gangster, western, Marx Brothers and burlesque comedy, sophisticated comedy, etc.
1971-72: Unit B, with particular emphasis on the Russians; the Germans; the French (Renoir, Clair, Vigo, Cocteau, Carné); and others.
2-1/2 hours per week — screening, discussion
1-1/2 hours per week — analysis, discussion
- 340 Documentary Film. Half Course. First Term. M. Malik**
A survey of the documentary film field, the course will examine the various styles of documentaries, e.g., the Romantic, Realistic, Impressionistic, Scientific, Biographical, Ethnographical, and Sociological. These styles will be examined in detail in the works of Flaherty, Grierson, Capra, Wright, Kroiter, and Thompson. Individual student projects will be assigned.
Screenings: every second week for one term.
Consultation hours with Professor to be arranged.
- 355 Communication Research. Half Course. First Term. M. Malik**
An examination of the aids and practical research methods for information chains. Limited experiments will be conducted on information complexes, e.g., 3D complexes-cinema, photography, the painted picture, metacomplexes and internal information spaces. Individual and group projects will be assigned.
Prerequisite: Course 205
Lectures: 3 hours per week, first term.
- 360 Elementary Film Making I. Half Course. First Term. Lab. C. Fischer, S.J.**
An introduction to film making, this course stresses familiarization with equipment, sensual-visual perception, and the basic construction of a film in terms of visual and literary continuity.
Lectures: 3 hours per week, first term.

- 365 Elementary Film Making II. Half Course. Second Term. Lab. C. Fischer, S.J.**
A study of the motion picture camera and its uses, of lenses and of creative focusing, the course examines in detail visual continuity and sensual and psychological perception.
Prerequisite: Course 360 or consent of the Instructor.
Lectures: 3 hours per week, second term.
- 370 Fundamentals of Television Production I. Half Course. First Term. Lab. Staff**
After introducing students to the use of video, audio, and lighting boards, the course provides opportunities for experimentation in the scripting, programming, and producing of the simpler programme formats from rehearsal through final production. All programs are video-taped for playback and discussion.
Lectures: 3 hours per week, first term.
- 375 Fundamentals of Television Production II. Half Course. Second Term. Lab. Staff**
A continuation of Part I, this course explores the creative possibilities inherent in the television medium and the better original works of students are produced. All programs are video-taped for playback and discussion.
Prerequisite: Course 370 or consent of the Instructor.
Lectures: 3 hours per week, second term.
- 400 Mass Communication. Half Course. First Term.**
Interdisciplinary – See Sociology 401.
- 405 Psychology of Communication. Half Course. First Term.**
Interdisciplinary – See Evening Division Calendar
- 415 Seminar in Advertising and Public Relations. Full Course. J. Moore**
(a) A probe of advertising, the seminar will examine among other things, the social and economic effects of advertising, the principles of effective copy, layout and design, and the rationale behind present-day media strategies.
(b) A study of the nature, organization, and function of the corporate image for various sectors of the public, as clarified by case analysis of present-day industries.
Individual group projects will be assigned.
Lectures: 3 hours per week for two terms.

- 420 Propaganda. Half Course. Offered Both Terms. D. Murphy**
The course is based on the assumption that today propaganda envelops man with its orchestration of communication tools and psychological techniques. The history and character of propaganda will be presented as an introduction to an analysis of its permeation into technological society. Under discussion will be such phenomena as mass hypnosis, the propaganda ethic, information warfare, national character, the formation of political opinions and attitudes, statistical persuasion and subliminal communication. Points of reference will include - war information systems, public relations, royal commissions, advertising, group therapy sessions, market research, government cultural and social programs, political campaigns and social animation projects.
Lectures: 3 hours per week for one term.
- 430B. The Contemporary Cinema. Half Course. Second Term. M. Gervais, S.J.**
A study of the great film artists since 1945, from the artistic and the over-all cultural point of view.
This course is given each year, on a two-year cyclic basis:
1970-71: Unit A, intensive study, on the one hand, of Ingmar Bergman and, on the other, of the *nouvelle vague* (Truffaut, Chabrol, Resnais, Varda and, above all, Godard). Other directors and films may be presented such as the Canadians, the Japanese, Satyajit Ray, etc.
1971-72: Unit B, intensive study of the Italians (Neo Realism, Rossellini, De Sica, Visconti, Fellini, Antonioni, Pasolini, etc.) as well as other films, especially from the Eastern European countries, England (Angry Young Men, Pop-Beatles, Lester, etc.).
2-1/2 hours per week – screening, discussion
1-1/2 hours per week – analysis, discussion
- 435 Film Ideas. Half Course. Offered Both Terms. M. Gervais, S.J.**
This course centers on problems in film criticism, film theory, and film aesthetics, within the context of the contemporary sensibility. Films high-lighting certain contemporary aesthetic positions are seen, discussed, analyzed, and written about by the students.
Prerequisite: 330, 335, 430 or by approval of the Instructor.
Lectures: 3 hours per week for one term.
- 450 Seminar in Contemporary Mass Media and Revelation. Full Course.**
Interdisciplinary – See Theological Studies 444.

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- 455 Communication Programming. Half Course. Second Term. M. Malik**
An advanced seminar for students interested primarily in Communication theory and research. Individual projects will be assigned on the analysis of information chains, the analysis of performing conditions, the analysis of receiver responses, the design of programs, the realization of pilot programs and the evaluation or measurement of the efficiency of these programs.
Prerequisite: Course 355
Lectures: 3 hours per week for one term.
- 460 Experimental Workshop in Motion Pictures. Full Course. C.F. Gagnon**
Students who have shown more than average promise will be invited to join the workshop.
Prerequisite: Courses 360, 365.
Lectures: 3 hours per week for two terms
- 470 Experimental Workshop in Television. Full Course J.E. O'Brien, S.J.**
Students who have shown more than average promise will be invited to join the workshop.
Prerequisite: Course 370, 375.
Lectures: 3 hours per week for two terms.
- 500 History of Communication Arts. Full Course. J.E. O'Brien, S.J., M. Malik**
(Not offered 1971-72)
Closed Registration. Course to be conducted in Europe. History of architecture, painting, music, film, radio, TV and drama with strong emphasis on information structure and communication process in the arts. Studies in museums, collections, theatres and archives in France, Great Britain, Germany, Italy, Switzerland, and Austria.
(90 hours minimum of lectures from Professors in Europe)
- 600 Education in Communication Arts. Full Course. Lab. J.E. O'Brien, S.J., M. Malik**
(Not offered 1971-72)
Closed Registration. Course to be conducted in Europe. A survey of styles and methods of education in various Communication Arts-screen education, drama education, film and TV training, education of design and architecture. Studies made of British Film Institute, Bauhaus School of Design, Munich Film and T.V. Academy, Cinecity in Rome, and IDHEC in Paris.
(90 hours minimum of directed lab. work in museums, galleries, etc.)

COMMUNICATION ARTS

- B. REQUIREMENTS FOR THE NEW 3-YEAR UNIVERSITY PROGRAM, BEGINNING SEPTEMBER 1971.**
15 full courses for a B.A. with a Major in Communication Arts, of which only 5 courses may be taken each year. Majors in Communication Arts will take a minimum of 7 courses in the Department.
Note: One elective in both UNIVERSITY II and III may have to be taken from a specified list of courses approved by Senate.
- UNIVERSITY I**
3 full courses in Communication Arts.
2 other courses with the approval of the Department.
- 300 History of Communication Media. Half Course. M. Malik**
Selected segments from the history of film, radio, television, drama, journalism, and design, related to the contemporary philosophy of communication arts. Explanations and demonstrations of major styles, art work, authors.
Experimental Course: both terms.
- 310 Dynamics of Visual Representation. Half Course. D. Diniacopoulos**
A primer on creativity and decision-making with black and white photography as the medium. Precise shooting and printing will be required. Fundamental laws of geometrical optics are explored and media are examined for their inter-relationships. A panel of professional critics reviews the work with students. (\$50.00 charge for materials).
Lectures: 3 hours per week for one term.
Lab: 3 hours per week for one term.
- 350 Communication Analysis. Half Course. M. Malik**
General and detailed analysis of various information complexes, e.g., exhibitions, theatres, cinema performances, museums, galleries, countryside, city streets, highways, department stores, etc. — from the point of the information aids used to influence the perception of visitors — light, space, sound, pictures, words, and exhibits.
Individual student projects will be assigned.
Lectures: 3 hours per week for one term.

370 Introduction to Audio-Visual Media Technology. Half Course. Staff
Basic instruction in the technology of picture and sound, basic operational practices; basic physics, electricity, acoustics and electronics, related to equipment: cameras, projectors, tape and video-tape recorders, T.V. and film studios. Basic optics and basic photochemistry.
Lectures: 3 hours per week for one term.

380 Introductory Film and Television Production. Full Course. C. Fisher, S.J.,
D. Murphy, G. Valaskakis.
A practical approach to an understanding of the common elements of these media, and of the specific differences inherent in their effective use. The film section of this course stresses basic mastery of equipment (8mm) and film grammar and syntax; the television section, the use of video, audio, and lighting boards, and experimentation in the scripting, programming, producing of the simpler programme formats.
Lectures: 3 hours per week for two terms.

THEATRE ARTS SECTION: OPEN TO ALL UNIVERSITY I STUDENTS

Theatre Arts 221. Introduction to Theatre. Full Course. G. Marsolais
(See CEGEP Calendar)

Theatre Arts 321. Media Acting. Full Course. G. Marsolais
This course consists of two parts: A) explanation and lectures about famous film and television actors, with examples of their work such as — Chaplin, Guinness, Mifune, von Sydow, K. Hepburn, A. Magnani, I Thulin. B) practical workshop in body movement, acting, directing with trained actors.
Lectures: 2 hours per week for two terms.
Workshop: 2 hours per week for two terms.

Theatre Arts 421. Media Theatre. Full Course.
(Not offered 1971-72)
Survey and exploration of various performance styles in film, television, theatre, American, English, French and Italian realism in acting. The Russian epic style. The new approach in recent films. Students are trained for programmed performance (étude, sequence, scene) with the stress on feature film or feature programme in television.

Theatre Arts 521. Experimental Workshop in Performing Arts. Half Course.
(Not offered 1971-72).
Individual student projects, études, exercices in advanced acting for media carriers.

THE FOLLOWING COURSES WILL BE OFFERED IN COMMUNICATION ARTS IN 1972 AND 1973 AS YEARS II AND III BEGIN.

- 400 Media and Media Culture. Full Course.
- 405 Non-verbal and Verbal Language. Full Course.
- 410 Photography as Visual Language. Full Course.
- 415 Propaganda. Half Course.
- 420 Theatre as Communication. Half Course.
- 425 The Script and Its Uses. Half Course.
- 420 Documentary Film. Half Course.
- 435 Documentary Television. Half Course.
- 440 Explorations in the Silent Cinema. Half Course.
- 445 Explorations in the Talkies. Half Course.
- 450 Communication Research. Half Course.
- 470 Communication of Ideas Through the Use of Sound. Full Course.
- 480 Intermediate Film Production I. Half Course.
- 485 Intermediate Film Production II. Half Course.
- 490 Intermediate Television Production I. Half Course.
- 495 Intermediate Television Production II. Half Course.
- 500 Communication and the Social Process. Half Course.
- 505 Communicational Media — Use — Performance — Rhetorics. Full Course.
- 510 Psychology of Communication. Half Course.
- 515 Seminar in Mass Media and Revelation. Full Course.
- 520 Seminar in Media Forecast. Half Course.
- 530 Documentary Film Genres. Half Course.
- 540 Contemporary Cinema. Half Course.
- 545 Film Ideas. Half Course.
- 550 Communication Programming. Half Course.
- 555 Seminar in Advertising and Public Relations. Full Course.
- 580 Seminar in Experimental Production. Full Course.
- 585 Advanced Film Production. Full Course.
- 590 Advanced Television Production. Full Course.

COMPUTER SCIENCE

Department Chairman D. West

Courses leading to a B. Sc. with a Major in Computer Science.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Computer Science 340	Computer Science 322 or 221 and 321	Computer Science 551
Mathematics 402	Computer Science 351	Computer Science Elective 400 or 500 level
Mathematics 434	Computer Science 333 or 441 and 425	Engineering 154 or 164 or 684
Natural Science Elective Elective	Mathematics 324 or 540 Natural Science Elective Elective*	Natural Science Elective Elective*

* These electives may have to be taken from a specified list of courses approved by Senate

Note: If neither Computer Science 221 or 241 were taken during the Collegial Program, Computer Science 241 must be taken in University I.

A B.Sc. graduate with a Major in Computer Science will be familiar with the standard mathematical and computational techniques used in scientific and engineering applications. He is also expected to have sufficient general knowledge of science and the scientific method that he can advise on the best use of computers in the design, execution and interpretation of scientific experiments.

221AB Computer Applications. Half Course. R. Gallagher

A practical introduction to business computing. Exercises in obtaining, entering, storing, altering and retrieving information. Analysis of problems for computer solution; methods of programming and documenting. The use of time-sharing terminals.

Lectures and problems: 3 hours per week, first or second term.

301AB Survey of Computers. Half Course. D. West

An introductory course for Arts students with no previous experience of computers. History of computer development. Hardware components of a computer system, their capabilities and limitations. How input data are obtained, how a program is organized and written, and how the results are presented and interpreted. Exercises in elementary programming. The role of computers in science and industry.

Lectures: 3 hours per week, first or second term.

321B Business Applications of Computers. Half Course. R. Gallagher

Continuation of C.S. 221 for Commerce students. This course considers data processing from the point of view of company management. The uses, characteristics and limitations of contemporary computers and techniques used in business. Management theory applied to relations with the data processing department. Elementary systems analysis. Class projects will cover the study of various simple applications of data processing systems, from the original concept to the production and operation of the system.

Prerequisite: C.S. 221.

Lectures: 2 hours per week, second term.

Class Project: 1 hour per week, second term.

322 Business Languages. Full Course.

A practical course in programming for data processing. Assembler languages for the common computer systems. Programming in elementary Cobol. Applications to various equipment configurations. Documentation and testing of two complete programs.

Lectures: 2 hours per week for two terms.

Problems: 1 hour per week for two terms.

333A PL/I Programming. Half Course. B. Desai

Study of the basic rules and the important features of the PL/I language. This will be integrated with the solution of a variety of practical computer programming problems, both scientific and commercial.

Prerequisite: C.S. 340 or C.S. 321.

Lectures: 2 hours per week, first term.

Problems: 1 hour per week, first term.

340 Fortran Programming and Numerical Methods. Full Course. B. Desai

The basic rules of Fortran IV and IBM Fortran. Documenting and testing of programs. A number of problems typical of those encountered in science and engineering are to be solved on the computer.

Prerequisite: C.S. 241

Lectures: 2 hours per week for two terms.

Problems: 1 hour per week for two terms.

351A Organization of Data. Half Course. R. Gallagher

A basic theoretical course in data handling. Linear lists, linked lists, orthogonal lists, trees and rings. Basic algorithms for searching, sorting, posting and updating files. The choice of proper file structure and medium for various applications. Control of job flow by the operating system in a multi-programming computer. Directories, inverted lists, and Boolean searches for large information files.

Prerequisite: C.S. 241 or C.S. 221

Lectures: 3 hours per week, first term.

425B Mathematical Models of Real Systems. Half Course. D. West

The use of a computer to study situations occurring in the real world, with examples taken chiefly from business and industry. How models are used to study interactions between the parts of a system, to analyze the causes of observed effects, and to predict the effects of changed conditions. The scale, detail and boundaries of a model. The cyclic process of model development. Types of models available — deterministic, probabilistic, macroscopic or microscopic, optimizing. Computer methods for modelling and simulation.

Prerequisite: C.S. 241 or C.S. 221

Lectures: 2 hours per week, second term.

Problems: 1 hour per week, second term.

441A Advanced Fortran Programming. Half Course. D. West

The application of Fortran and its extensions in the development of large and sophisticated program systems. The use of tape and disk storage; segmentation of programs; use of library subroutines; multiple precision calculations; complex and logical and alphabetical variables; packing and unpacking of words. Programming for best efficiency and flexibility.

Prerequisite: C.S. 340.

Lectures: 2 hours per week, first term.

Problems: 1 hour per week, first term.

551A Theory of Automata. Half Course.

Theoretical description of computing machines. Finite state automata and sequential machines. Equivalence of states and machines, congruence, reduced machines, and analysis and synthesis of automata. Turing and other machines, recursion and decidability.

Prerequisite: C.S. 351.

Lectures: 3 hours per week, first term.

553B Computer Languages. Half Course.

Formal definition of programming languages; specification of syntax and semantics. Simple statements in various notations. Properties of algorithmic languages including scope of declarations, storage allocation, grouping of statements, and subroutines. Languages for list processing, string manipulation, data description, and simulation. Run-time representation of program and data structures.

Prerequisite: C.S. 351.

Lectures: 3 hours per week, second term.

555B Information Systems. Half Course. B. Desai

The course deals with the problems of organization, storage, search and retrieval of information. Topics to be covered will be dictionary construction and look-up, automatic indexing, search and matching procedures, information dissemination systems, methods of user interaction and applications in management and decision-making.

Prerequisite: C.S. 351.

Lectures: 3 hours per week, second term.

The following courses are given in other departments. Approval for registration in any of these courses must be obtained from the department concerned.

131 Engineering — Numerical Analysis and Computation Methods. Half Course.

Lectures: 2 hours per week, first or second term.

154 Engineering — Introduction to Digital Computers. Full Course.

Lectures: 2 hours per week for two terms.

164 Engineering — Modern Systems Methods. Full Course.

The course is designed to provide adequate foundations for applying systems engineering methods to various disciplines. Selected topics in numerical algorithms, methods of optimization of deterministic models, simulation of continuous systems and their application to representative problems. A large part of the course involves the analysis and solution of problems using student-developed packages as well as the standard scientific software.

Lectures: 2 hours per week for two terms.

Problems: 3 hours per week for two terms.

684 Engineering — Switching Circuits. Half Course.

Lectures: 2 hours per week, first term.

Lab: 3 hours per week, first term.

COMPUTER SCIENCE

340 Mathematics — Numerical Methods. Full Course.

Lectures: 3 hours per week for two terms.

540 Mathematics — Numerical Analysis. Full Course.

Lectures: 3 hours per week for two terms.

ECONOMICS

ECONOMICS

Department Chairman

S.A. Alvi

Courses leading to an Honour B.A. in Economics.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Economics 360 Economics 371 Elective Elective Elective	Economics 454 Economics 466 Economics Elective Elective Elective***	Economics (two courses from 561, 564 or 580) Economics Elective Elective Elective***

Courses leading to a B.A. with a Major in Economics.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Economics 310 Economics 302 or 321* Elective Elective Elective	Economics 404 Economics 406 Elective Elective Elective***	Economics Elective Economics Elective Economics Elective Elective Elective***

Courses leading to an Honours B. Comm. in Economics.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Economics 360 Economics 371 Accounting 402 Elective Elective	Economics 454 Economics 466 Economics Elective Business Elective***	Economics (two courses from 561, 564 or 580) Economics Elective Business Elective Elective***

Courses leading to a B. Comm with a Major in Economics

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Economics 310 Economics 302 or 321* Accounting 402 Elective Elective	Economics 404 Economics 406 Business 408 Elective Elective***	Economics Elective Economics Elective Economics Elective Business Elective Elective***

****Courses leading to a B.A. with a Joint Major in Economics and Political Science.**

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Economics 310 Economics 302 or 321* Political Science Elective Elective Elective	Economics 406 Political Science 310 or 431A Elective Elective Elective***	Economics 433 or 535 Economics Elective Political Science 570 Political Science Elective Elective***

* Students who have not taken Mathematics 101 may not take Economics 321 without permission.

** A joint Major in Economics and Political Science consists of nine courses in both departments. Before entering the programme a student must have completed an introductory course in both Economics and Political Science at the CEGEP level.

*** These electives may have to be taken from a specified list of courses approved by Senate.

Note: Admission into the Honours Programme is by permission of the Department.
The fourth year of the old Economics Programmes will be found on pages 274 f.

- 300 Principles of Economics. Full Course.** **Staff**
A survey of the existing economic order, with particular emphasis on the North American Economy. Concentration is on explaining the operation of the price system as it regulates production, distribution and consumption, and as it in turn is modified and influenced by private organization and government policy. Consideration is also given to the determination of aggregate economic activity. The main areas studied include: the monetary and banking systems in the United States and Canada; the composition and fluctuations of national income; and the major conditions of economic growth; all as influenced by monetary, fiscal and other policies.
Lectures: 3 hours per week for two terms.
- 302 Economic History. Full Course.** **Bernice Wright**
An analysis of the development of Western Europe, Canada and the United States.
Lectures: 3 hours per week for two terms.
- 310 Intermediate Economic Theory. Full Course.** **F.J. Hayes**
In this course consideration will be given to such topics as: theory and measurement of demand; production functions; cost analysis; price and output policy under various market conditions; factor pricing; income and employment theory.
Lectures: 3 hours per week for two terms.

- 321 Mathematics for Economists. Full Course.** **Z.R. Liu**
An introductory application of mathematics to economic analysis. Topics: analytic geometry; differential and integral calculus; differential and difference equations; elements of linear algebra. Selected topics of economic applications will be covered throughout the course.
Lectures: 3 hours per week for two terms.
- 360 Intermediate Economic Theory. (Honours). Full Course.** **S.A. Alvi**
Lectures: 3 hours per week for two terms.
- 371 Mathematics for Economists. (Honours). Full Course.** **Staff**
Lectures: 3 hours per week for two terms.
- 403 Theories and Processes of Economic Growth and Development. Full Course.** **S.A. Alvi**
(Not offered 1971-72)
A consideration of various contributions by economists and others to an understanding of how societies grow and undergo institutional change. The course also includes a study of the problem of accelerating economic growth, with emphasis on selected developing nations of the present time, an analysis of the process of capital formation, the role of the state (in different politico-economic systems), the role of external assistance in economic development, and the economics of investment decisions. Emphasis is also given to the interaction of the social change and economic development.
Lectures: 3 hours per week for two terms.
- 404 Statistical Methods. Full Course.** **Staff**
The application of statistical methods to economic problems, including probability, testing hypotheses, time series, correlation and linear regression analysis.
Lectures: 3 hours per week for two terms.
- 405 Economic Fluctuations. Full Course.** **Staff**
(Not offered 1971-72)
A review of some theories of causes of Economic Fluctuations. Discussion of the economic climate and of stabilization policies.
Lectures: 3 hours per week for two terms.

- 406 Money, Banking and Income Theory. Full Course.** Staff
The functions of money, money and prices; the evolution and kinds of money; the value of money, the supply of money, monetary and banking developments in Canada, the United States and the United Kingdom; the determinants of national income; the multiplier and acceleration principles, monetary and fiscal policy.
Lectures: 3 hours per week for two terms.
- 433 Comparative Economic Systems. Full Course.** Staff
(Not offered 1971-72)
The evolution of economic systems is discussed and evaluated in terms of modern economic theory, and from the point of view of economic efficiency and development.
Lectures: 3 hours per week for two terms.
- 448 Labour: Economics and Relations. Full Course.** S.A. Alvi
Origin and development of Canadian, U.S. Labour organizations; contemporary trade union problems; labour laws; (U.S., CANADA, P.Q.) and public policies; collective bargaining and strikes. Determinants of labour demand, labour supply; wage and employment theory; unemployment; manpower policy; income policy. Emphasis is placed on the Canadian context.
Lectures: 3 hours per week for two terms.
- 454 Statistical Methods. (Honours). Full Course.** A. Takahashi
Lectures: 3 hours per week for two terms.
- 466 Monetary and Income Theory. (Honours). Full Course.** Bernice Wright
Income determination in a money economy. Some problems, including economic stability, inflation, balance of payments and international liquidity.
Lectures: 3 hours per week for two terms.
- 507 International Trade. Full Course.** A.G. Lallier
Historical and economic background of International Trade; the theory of International Trade; balance of payments; international capital movements; foreign exchange; international commercial policies; international organization dealing with commercial theory.
Lectures: 3 hours per week for two terms.

- 535 Public Finance. Full Course.** Bernice Wright
A study of the principles and practices of Public Finance, with special reference to North America.
Lectures: 3 hours per week for two terms.
- 537 Canadian Economic Policy. Full Course.** F.J. Hayes
This course is devoted to examining economic policy in a number of selected areas.
Lectures: 3 hours per week for two terms.
- 545 Industrial Organization. Full Course.** Staff
(Not offered 1971-72)
Theory of the firm; theories of imperfect competition, including some recent theoretical developments in this area; the structure and performance of the Canadian and American industries; determinants of market structure; empirical evidence of pricing and output decision of firms under different market structures and anti-trust or combines policy and other microeconomic policies.
Lectures: 3 hours per week for two terms.
- 561 History of Economic Thought. (Honours). Full Course.** A.G. Lallier
A critical review of economic thought since Plato and Aristotle.
Lectures: 3 hours per week for two terms.
- 564 Operations Analysis and Economic Theory. (Honours). Full Course.** Z.R. Liu
Application of mathematical techniques to economic analysis. Topics will include the Calculus, Theory and Determinants, Programming etc., and their application to selected areas in Economic Theory: Production and Inventory decisions; Linear Programming; Transportation problems; Queues; Input-output Analysis, Game Theory, Econometric Macromodels.
Lectures: 3 hours per week for two terms.
- 580 Macro-Economic Analysis. (Honours). Full Course.** A. Takahashi
A critical study of selected topics in Aggregative Economic Analysis.
Lectures: 3 hours per week for two terms.

FACULTY OF ENGINEERING

Dean

G.W. Joly

THE OBJECTIVE

The overall objectives of the Faculty of Engineering are the growth and development of the student into a self-identifiable person and the acquisition by him of the knowledge upon which to build his career. In the concrete, these goals are proposed to the student as a personal search for excellence and the forming of himself to manage industry, whether technically or administratively.

While the subjects of the curriculum — technology, science, humanities, professional practice — have to be presented as discrete disciplines, the Faculty seeks at all times to make the student aware that he must integrate them into his personality so that they become the foundation for supporting his chief function in society — the making of decisions.

THE PROGRAM

The Faculty of Engineering offers in 1971/72 a program of two cycles: a two year Collegial (CEGEP) program followed by a three year university program. On the successful completion of the university program, students will be awarded a Bachelor of Science degree. Although the curricula of the programs are designed to enable students to pursue advanced studies in engineering, science or business at other universities, nevertheless, those who do not elect to do so, will find themselves well prepared for a career in industry at a high technological level. Students aspiring to practice as professional engineers are advised to register in an option described as a professional curriculum.

THE CURRICULA

Students accepted for registration in the Collegial Program in Engineering in September are enrolled in the two-year program, a program which is parallel to the one offered in the Colleges d'Education Général et Professionnel (CEGEP). On the successful completion of it, students will be admitted to a three year university program of Engineering. The first year of it will be common to all students; the two upper years are specialized.

Applications are invited for the University cycle from graduates of Collegial programs completed outside of Loyola.

THE OPTIONS

The curricula are made up of seven elective blocks of courses: one in Civil Engineering, three in Electrical Engineering, three in Mechanical Engineering. These seven options are described at the beginning of the lecture schedules appropriate to each of the above three areas of Engineering, on pages 93, 95, 100.

CONSULTATION

Ready access to the members of the staff for consultation by students is provided. While this consultation is designed for those already enrolled in the program, it is suggested that those accepted for entry into the first university year, seek an interview before September. This can be done by calling the Dean of Engineering's office at Loyola, 514-482-0320.

PROMOTION

For promotion an overall of at least 60% of the weighted marks is required, and at least 50% in each separate examination. A student who fails to achieve promotion and wishes to discuss the possibility of continuing his academic career in the Faculty of Engineering must apply IN WRITING to the Dean of Engineering, before July 15.

ADMISSION TO THE UNIVERSITY**1. For graduates of a CEGEP or Collegial program outside of Loyola.**

1. The applicant must have followed a Science-Engineering curriculum.
2. The applicant must have achieved at least the minimum mark required by the Ministry of Education of Quebec for graduation from the Science-Engineering curriculum of a CEGEP.

2. For engineering students of other universities.

The applicant should write to the Dean of Engineering, Loyola of Montreal for information.

UNIVERSITY PROGRAM

FIRST YEAR ENGINEERING – ALL OPTIONS

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
MECHANICS II	E-011	75	3	—	—	—
STRENGTH OF MATERIALS	E-031	75	—	3	—	—
ENGINEERING PROBLEMS	E-111	50	—	—	2	—
NUMERICAL ANALYSIS	E-131	50	2	—	—	—
PROFESSIONAL PRACTICE	E-311	50	1	1	—	—
MATERIALS SCIENCE	E-801	100	2	2	—	—
DIFFERENTIAL EQUATIONS	M-312	100	2	2	—	—
ALGEBRA	M-212	100	2	2	—	—
*ELECTIVE	—	100	3	3	—	—
**PLUS						
EITHER HUMANITY	—	100	3	3	—	—
or MODERN PHYSICS	P-303	100	—	3	—	—
**PLUS						
EITHER CIRCUIT ANALYSIS	E-631	75	2	—	3	—
and ELECTRICAL ENG.	E-632	100	—	3	—	3
OR CIRCUITS & ELECTRONICS	E-621	175	2	3	3	3
TOTAL		975	20	19	5	3

*In Faculty of Arts. Lecture schedule may limit choice.

Early consultation with Engineering staff is invited.

**Consult staff before registering for these electives.

CIVIL ENGINEERING

The Civil Engineering Curriculum is a professional one, prepared for students whose goal is either the design of structures or the design and control of engineering systems.

FIRST YEAR CIVIL ENGINEERING
COMMON IN ALL OPTIONS

*SECOND YEAR – CIVIL ENGINEERING

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
ELEMENTS OF MECH. OF MACH.	E-036	75	3	—	3	—
STRENGTH OF MATERIALS LAB.	E-042	50	—	—	3	—
STRUCTURAL ANALYSIS I	E-138	100	1	1	2	2
STRUCTURAL DESIGN I	E-235	75	—	2	—	3
SURVEYING	E-534	75	2	—	2	—
THERMODYNAMICS I	E-736	75	3	—	—	—
FLUID MECHANICS I	E-737	75	—	3	—	—
GEOLOGY	G-	100	—	3	—	3
ECONOMICS OR INTRO.						
BUS. ANAL.	—	100	3	3	—	—
**ELECTIVE	—	100	3	3	—	—
TOTAL		825	15	15	10	8

*Commences 1972/73

**This elective may have to be taken from a specified list of courses approved by Senate.

***THIRD YEAR – CIVIL ENGINEERING**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
REINFORCED CONCRETE	E-269	75	—	2	—	3
SOILS MECHANICS & FOUNDATIONS	E-567	125	2	2	3	—
TRANSPORTATION ENGINEERING	E-568	75	2	—	2	—
SANITARY ENGINEERING	E-569	75	—	2	—	2
TOWN PLANNING	E-571	75	—	2	—	2
MUNICIPAL ENGINEERING	E-572	50	2	—	—	—
**ELECTIVE	—	100	3	3	—	—
PLUS						
EITHER STRUCT. DESIGN. OR PROD. MANAGEMENT	E-268	75	—	2	—	3
PLUS	B-470	100	3	—	—	—
EITHER STRUC. ANL.II AND MANAGEMENT & SPECIFICATION	E-172	75	2	—	2	—
OR ADMINISTRATIVE PRACT.	E-570	50	2	—	—	—
	B-414	100	3	3	—	—
TOTAL		750/800	12/16	13/14	5/7	7/10

*Commences in 1973/74.

**This elective may have to be taken from a specified list of courses approved by Senate.

ELECTRICAL ENGINEERING**OPTION A**

A Professional Curriculum with a strong core of basic electrical engineering courses and a wide range of technical electives from the several fields of electrical engineering. Emphasis is placed on electronics, control systems and microwaves, either as areas for graduate study or as bases for a professional career in industry.

OPTION B

A Professional Curriculum of the same general nature outlined in Option A. However, emphasis is placed on digital computer techniques and computer engineering to form, as in Option A, areas for graduate study or bases for a professional career in industry.

OPTION C

Designates interdisciplinary programs suitable for students with aspirations towards Business Management. A comprehensive course selection is made under faculty guidance from the course listed in the options above or as alternative courses.

**FIRST YEAR ELECTRICAL ENGINEERING
COMMON IN ALL OPTIONS*****SECOND YEAR – ELECTRICAL ENGINEERING – OPTION A**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
ELECTRONIC CIRCUITS & DEVICES	E-635	100	3	—	3	—
NETWORK ANALYSIS	E-636	75	3	—	—	—
ELECTRICAL MACHINES	E-637	100	3	—	3	—
ELECTROMAGNETIC THEORY	E-638	75	—	3	—	—
SOLID STATE PHYSICS	E-639	75	—	3	—	—
SWITCHING CIRCUITS	E-640	75	—	2	—	3
THERMODYNAMICS I	E-736	75	3	—	—	—
FLUID MECHANICS I	E-737	75	—	3	—	—
PROBABILITY & STATISTICS	M-317	75	—	3	—	—
ENGINEERING MATHEMATICS	M-314	100	3	3	—	—
**ELECTIVE	—	100	3	3	—	—
TOTAL		925	18	20	6	3

*Commences 1972/73.

**This elective may have to be taken from a specified list of courses approved by Senate.

*THIRD YEAR – ELECTRICAL ENGINEERING – OPTION A

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
CONTROL & SIMULATION LAB	E-171	75	—	—	3	—
CONTROL SYSTEMS	E-173	75	3	—	—	—
TECHNICAL PROJECT	E-367	100	—	—	3	6
COMMUNICATION SYSTEMS	E-667	75	3	—	—	—
SOLID STATE DEVICES & INTEG. CIRC. SYS.	E-676	100	—	3	—	3
**ELECTIVE	—	100	3	3	—	—
PLUS 2 ELECTIVES FROM						
INTRODUCTION TO DIGITAL COMPTR. ENG.	E-135	100	2	2	—	—
DIGITAL COMPUTER SYSTEMS	E-168	75	—	3	—	—
LINEAR CONTROL SYSTEMS	E-174	75	3	—	—	—
NONLINEAR CONTROL SYSTEMS	E-176	75	—	3	—	—
CONTROL & INSTRUMENTATION CIR. & DEV.	E-671	75	—	3	—	3
ELECTROMOTOR SYSTEMS	E-672	100	—	3	—	3
ELECTRICAL MACHINES II	E-673	150	3	3	—	—
E.M. TRANSMISSION & RADIATION	E-674	100	3	—	3	—
ACOUSTICS	E-677	100	—	3	—	2
COMMERCIAL LAW	B-502	100	3	3	—	—
PRODUCTION MANAGEMENT	B-470	100	—	3	—	—
TOTAL		675/775	9/15	6/12	6/9	9/15

*Commences 1973/74.

**This elective may have to be taken from a specified list of courses approved by Senate.

*SECOND YEAR – ELECTRICAL ENGINEERING – OPTION B

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
INTRODUCTION TO DIGITAL COMPTR. ENG.	E-135	100	2	2	—	—
COMPUTER AIDED DESIGN I	E-137	100	3	—	2	—
NETWORK ANALYSIS	E-636	75	3	—	—	—
ELECTROMAGNETIC THEORY	E-638	75	—	3	—	—
SWITCHING CIRCUITS	E-640	75	—	2	—	3
THERMODYNAMICS I	E-736	75	3	—	—	—
FLUID MECHANICS I	E-737	75	—	3	—	—
PROBABILITY & STATISTICS	M-317	75	—	3	—	—
ENGINEERING MATHEMATICS	M-314	100	3	3	—	—
**ELECTIVE	—	100	3	3	—	—
TOTAL		850	17	19	2	3

*Commences 1972/73.

**This elective may have to be taken from a specified list of courses approved by Senate.

***THIRD YEAR – ELECTRICAL ENGINEERING – OPTION B**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
CONTROL & SIMULATION LAB	E-171	75	—	—	3	—
CONTROL SYSTEMS	E-173	75	3	—	—	—
TECHNICAL PROJECT	E-367	100	—	—	3	6
ELECTRICAL MACHINES I	E-637	100	3	—	3	—
SOLID STATE DEVICES & INTEG. CIRC. SYS.	E-676	100	—	3	—	3
**ELECTIVE	—	100	3	3	—	—
PLUS 2 ELECTIVES FROM						
DIGITAL COMPUTER SYSTEMS	E-168	75	—	3	—	—
NONLINEAR CONTROL SYSTEMS	E-176	75	—	3	—	—
COMPUTER AIDED DESIGN II	E-177	100	3	—	2	—
COST ENGINEERING	E-368	150	3	3	—	—
ELECTRONIC CIRC. & DEV.	E-635	100	3	—	3	—
THEORY OF AUTOMATA	CS-551	100	—	3	—	—
COMPUTER LANGUAGES	CS-553	100	3	—	2	—
OPERATIONS ANALYSIS	B-518	100	3	3	—	—
TOTAL		700/800	9/15	6/12	9/14	9

*Commences 1973/74.

**This elective may have to be taken from a specified list of courses approved by Senate.

***SECOND YEAR – ELECTRICAL ENGINEERING – OPTION C**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
COMPUTER AIDED DESIGN I	E-137	100	3	—	2	—
NETWORK ANALYSIS	E-636	75	3	—	—	—
SWITCHING CIRCUITS	E-640	75	—	2	—	3
THERMODYNAMICS I	E-736	75	3	—	—	—
FLUID MECHANICS I	E-737	75	—	3	—	—
PROBABILITY & STATISTICS	M-317	75	—	3	—	—
ECONOMICS	EC-300	100	3	3	—	—
INTRODUCTION TO BUS. ANALYSIS	B-312	100	3	3	—	—
**ELECTIVE	—	100	3	3	—	—
TOTAL		775	18	17	2	3

*Commences 1972/73

***THIRD YEAR – ELECTRICAL ENGINEERING – OPTION C**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
CONTROL & SIMULATION LAB	E-171	75	—	—	3	—
CONTROL SYSTEMS	E-173	75	3	—	—	—
TECHNICAL PROJECT	E-367	100	—	—	3	6
**ELECTIVE	—	100	3	3	—	—
PLUS 4 ELECTIVES FROM						
ELECTRONIC CIR. & DEVICES	E-635	100	3	—	3	—
ELECTRICAL MACHINES I	E-637	100	3	—	3	—
COST ENGINEERING	E-368	150	3	3	—	—
PRODUCTION MANAGEMENT	B-470	50	—	3	—	—
COMMERCIAL LAW	B-502	100	3	3	—	—
OPERATION ANALYSIS	B-518	100	3	3	—	—
BUSINESS ECONOMICS	B-204	50	3	—	—	—
ADMINISTRATION OF THE FIRM	B-509	50	—	3	—	—
MATHEMATICAL MODELS	CS-425	50	2	—	1	—
TOTAL		550/750	6/18	3/15	6/12	6

*Commences 1973/74.

**This elective may have to be taken from a specified list of courses approved by Senate.

MECHANICAL ENGINEERING

OPTION A

This option is a professional curriculum for Mechanical Engineering emphasizing the design of mechanical components, machines and systems. This curriculum is recommended to students interested in design and aspiring to proceed to post-graduate studies in Mechanical Engineering and/or professional careers in industry.

OPTION B

This option is a professional curriculum in Mechanical Engineering emphasizing engineering fundamentals and providing an introduction to Business Administration. This curriculum is recommended to students interested in production and industrial engineering and aspiring to professional careers in industry.

OPTION C

This option is an interdisciplinary curriculum including basic engineering fundamentals and fundamentals of business administration. This curriculum is recommended to students basically interested in the administration of industry and wish to obtain a sound grasp of the increasingly high technological content in industry.

FIRST YEAR MECHANICAL ENGINEERING
COMMON IN ALL OPTIONS

*SECOND YEAR – MECHANICAL ENGINEERING – “A”

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
MECHANICS OF MACHINES	E-035	150	3	3	—	3
STRENGTH OF MATERIALS LAB.	E-042	50	—	—	3	—
SYSTEMS ANALYSIS	E-134		2	2	—	—
MECHANICAL DESIGN & STRESS ANALYSIS	E-234	150	2	2	3	3
PLANNING AND TECHNOLOGY OF MANUFACTURING	E-735	50	—	2	—	—
THERMODYNAMICS I	E-736	75	3	—	—	—
FLUID MECHANICS I	E-737	75	—	3	—	—
METALLURGY FOR ENGRS.	E-834	50	2	—	—	—
ENGINEERING MATHEMATICS	M-314	100	3	3	—	—
**ELECTIVE	—	100	3	3	—	—
TOTAL		900	18	18	6	6

*Commences 1972/73.
**This elective may have to be taken from a specified list of courses approved by Senate.

*THIRD YEAR – MECHANICAL ENGINEERING – “A”

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
MECHANICAL VIBRATIONS	E-067	75	3	—	—	—
CONTROL SYSTEMS	E-173	75	3	—	—	—
ADVANCED SYSTEMS ANALYSIS	E-169	75	—	3	—	—
MECHANICAL STRESS ANALYSIS	E-175	75	—	2	—	3
MECHANICAL DESIGN	E-267	75	2	—	3	—
EXPERIMENTAL ENGINEERING	E-767	50	1	—	3	—
MECHANICAL ENG. LAB.	E-768	50	—	—	—	3
THERMODYNAMICS II	E-769	75	3	—	—	—
FLUID MECHANICS II	E-770	75	—	3	—	—
HEAT TRANSFER	E-771	50	—	2	—	—
APPLIED THERMODYNAMICS	E-772	75	—	3	—	—
FLUID MACHINERY	E-773	75	3	—	—	—
**ELECTIVE	—	100	3	3	—	—
TOTAL		925	18	16	6	6

*Commences 1973/74.
**This elective may have to be taken from a specified list of courses approved by Senate.

*SECOND YEAR – MECHANICAL ENGINEERING – “B”

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
MECHANICS OF MACHINES	E-035	150	3	3	—	3
STRENGTH OF MATERIALS	E-042	50	—	—	3	—
LABORATORY						
MECHANICAL DESIGN & STRESS ANALYSIS	E-234	150	2	2	3	3
PLANNING AND TECHNOLOGY OF MANUFACTURING	E-735	50	—	2	—	—
THERMODYNAMICS I	E-736	75	3	—	—	—
FLUID MECHANICS*	E-737	75	—	3	—	—
METALLURGY FOR ENGRS.	E-834	50	2	—	—	—
PROBABILITY & STATISTICS	M-317	75	—	3	—	—
ENGINEERING MATHEMATICS	M-315	75	3	—	—	—
INTRODUCTION TO BUS. ANALYSIS	B-312	100	3	3	—	—
**ELECTIVE	—	100	3	3	—	—
TOTAL		950	19	19	6	6

*Commences 1972/73.
**This elective may have to be taken from a specified list of courses approved by Senate.

***THIRD YEAR – MECHANICAL ENGINEERING – “B”**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
MECHANICAL VIBRATIONS	E-067	75	3	—	—	—
CONTROL SYSTEMS	E-173	75	3	—	—	—
MECHANICAL STRESS ANALYSIS	E-175	75	—	2	—	3
MECHANICAL DESIGN	E-267	75	2	—	3	—
EXPERIMENTAL ENGINEERING	E-767	50	1	—	3	—
HEAT TRANSFER	E-771	50	—	2	—	—
PRODUCTION MANAGEMENT	B-470	50	3	—	—	—
ADMINISTRATION OF THE FIRM	B-509	50	—	3	—	—
COMMERCIAL LAW	B-502	100	3	3	—	—
**ELECTIVE PLUS	—	100	3	3	—	—
EITHER APPLIED THERMODYNAMICS OR FLUID MECHANICS II	E-772	75	—	3	—	—
	E-770	75	—	3	—	—
TOTAL		775	18	16	6	3

*Commences 1973/74.

**This elective may have to be taken from a specified list of courses approved by Senate.

***SECOND YEAR – MECHANICAL ENGINEERING – “C”**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
MECHANICS OF MACHINES	E-035	150	3	3	—	3
STRENGTH OF MATERIALS LAB.	E-042	50	—	—	3	—
MECHANICAL DESIGN & STRESS ANALYSIS	E-234	150	2	2	3	3
PLANNING AND TECHNOLOGY OF MANUFACTURING	E-735	50	—	2	—	—
THERMODYNAMICS I	E-736	75	3	—	—	—
METALLURGY FOR ENGRS.	E-834	50	2	—	—	—
PROBABILITY & STATISTICS	M-317	75	—	3	—	—
INTRODUCTION BUSINESS ANALYSIS	B-312	100	3	3	—	—
**ELECTIVE	—	100	3	3	—	—
ECONOMICS	—	100	3	3	—	—
TOTAL		900	19	19	6	6

*Commences 1972/73.

***THIRD YEAR – MECHANICAL ENGINEERING – “C”**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
CONTROL SYSTEMS	E-173	75	3	—	—	—
MECHANICAL DESIGN	E-267	75	2	—	3	—
FLUID MECHANICS I	E-737	75	—	3	—	—
HEAT TRANSFER	E-771	50	—	2	—	—
APPLIED THERMODYNAMICS	E-772	75	—	3	—	—
BUSINESS ECONOMICS	B-204	50	3	—	—	—
COMMERCIAL LAW	B-502	100	3	3	—	—
OPERATIONS ANALYSIS	B-518	100	3	3	—	—
PRODUCTION MANAGEMENT	B-470	50	—	3	—	—
**ELECTIVE	—	100	3	3	—	—
TOTAL		750	17	20	3	—

*Commences 1973/74.

**This elective may have to be taken from a specified list of courses approved by Senate.

APPLIED MECHANICS

- 011 Mechanics II.** **C. Goldman**
 Statics of particles and systems; vectors; simple frames; centroids; friction; moment of inertia of area and mass; bending moment; shearing force; axial force.
 Lectures: 3 hours per week, first term.
- 031 Strength of Materials.** **J. Krantzberg**
 Elastic and plastic properties of materials; axial, thermal, bending, shear and torsional stresses. Deflection of beams by differential equation of elastic line and moment area. Indeterminate members. Non-homogeneous sections.
 Lectures: 3 hours per week, second term.
- 035 Mechanics of Machines.** **K. Krakow**
 Kinematics, analytical and graphical methods of velocity and acceleration analysis of mechanisms, including linkages, cams and gears. Dynamics. Review of fundamental concepts, laws of conservation of impulse and momentum, energy, D'Alembert's Principle. Force analysis of mechanisms. Static and dynamic balancing of reciprocating and rotating mechanisms. Flywheel analysis. Gyroscopic motion. Friction, brakes, clutches, belt drives, simple harmonic motion.
 Lectures: 3 hours per week, both terms.
 Labs: 3 hours per week, second term.
 Text: Hirschhorn, J., *Dynamics of Machinery*, Pub. Nelson.
 Reference: Pestel E.C. and Thomson, W.T., *Dynamics*, McGraw-Hill.
- 036 Elements of Mechanics of Machines.** **K. Krakow**
 Kinematics, analytical and graphical methods of velocity and acceleration analysis of mechanisms, including linkages, cams and gears. Dynamics. Review of fundamental concepts, laws of conservation of impulse and momentum, energy, D'Alembert's Principle. Force analysis of mechanisms, static and dynamic balancing.
 Lectures: 3 hours per week, first term.
 Labs: 3 hours per week, first term.
 Text: Hirschhorn, J., *Dynamics of Machinery*, Nelson.
 Reference: Pestel E.C. and Thomson, W.T., *Dynamics*, McGraw-Hill.
- 042 Strength of Materials Lab.** **C. Goldman**
 Destructive and non-destructive testing: stress analysis using electrical strain gauges and photo stress techniques; properties of brittle and elastic materials.
 Lab: 3 hours per week, first term.

- 067 Mechanical Vibrations.** **K. Krakow**
 Vibrations, free, forced, damped; systems having single and multiple degrees of freedom; torsional vibration, critical speed of shafts, vibrations of beams.
 Lectures: 3 hours per week, first term.
 Text: Tse, S.F., Morse I.E. & Hinkle, R.T., *Mechanical Vibrations*, Allyn and Bacon.

ENGINEERING ANALYSIS

- 111 Engineering Problems.** **J. Krantzberg**
 Solving of problems in Mechanics and Mathematics. Great emphasis is laid on setting up problems in Engineering.
 Problems: 2 hours per week, first term.
- 131 Numerical Analysis and Computation Methods.** **S. Kubina**
 Digital Computer Programming and associated methods of numerical analysis useful in the solution of engineering problems. Laboratory periods are devoted to the solution of problems using digital computers in direct or time-sharing modes.
 Lectures: 2 hours per week, first or second term.
- 134 Systems Analysis** **K. Krakow**
 Particle mechanics. Field theory, gravitational, fluid flow, and electrical conduction fields. Analogies between mechanical and electrical systems, mechanical vibrations, heat flow, pipe flow, R-L-C circuits. Unit functions and their application.
 Lectures: 2 hours per week, both terms.
- 135 Introduction to Digital Computer Engineering.** **C.R. Ahooja**
 Fundamental concepts; switching algebra, number systems, codes, arithmetic operations and principles of logical design. Computer arithmetic and control units, computer memories, stored-program computers. Problems formulation coding and programming concepts, computer system organization. Examples shall be taken from modern general purpose computers.
 Lectures: 2 hours per week, both terms.

- 137 Computer Aided Design I.** **B. Desai**
 Selected Topics in advanced numerical methods for solution of engineering problems, iterative solutions of algebraic and transcendental equations, solutions of systems of linear algebraic equations, matrix manipulation, polynomial curve fitting, solution of ordinary and partial differential equations and of systems of differential equations. Stability and accuracy of solutions. The methods are illustrated by application to typical engineering problems and to recent techniques in computer aided design.
 Lectures: 3 hours per week, first term.
 Labs: 2 hours per week, first term.
- 138 Structural Analysis I.** **C. Goldman**
 Analysis of statically indeterminate structures, moment distribution, slope deflection, virtual work, and strain energy; deflection analysis; influence lines; collapse methods.
 Lectures: 1 hour per week, both terms.
 Labs: 2 hours per week, both terms.
- 168 Digital Computer Systems.** **D. Kaufman**
 Computer system organization. Design of systems to perform data acquisition, display and control. Interplay between hardware and software in digital system design. Implementation of digital systems using discrete and integrated components. Application of digital computers to control systems.
 Lectures: 3 hours per week, second term.
- 169 Advanced System Analysis.** **K. Krakow, J. Krantzberg**
 Application of matrix methods to problems in vibrations; application numerical methods to problems in fluid mechanics, digital and analog computer applications.
 Lectures: 3 hours per week, second term.
- 171 Control and Simulation Lab.** **D. Kaufman**
 Measurements on control systems; modelling of control and physical systems; fundamentals of analogue computation; analogue computer simulation of engineering systems.
 Labs: 3 hours per week, first term.
- 172 Structural Analysis II.** **J. Krantzberg**
 Computer methods in structural analysis; rigid frames and arches; dynamic loading.
 Lectures: 2 hours per week, first term.
 Labs: 2 hours per week, first term.

- 173 Control Systems.** **V. Stefanovic**
 Open and closed loop control. Sensitivity. Laplace transform. Stability by root-locus Bode, Nyquist, Routh-Hurwitz methods system compensation and design by frequency and complex plane techniques.
 Lectures: 3 hours per week, first term.
- 174 Linear Control Systems.** **V. Stefanovic**
 State space descriptions of linear systems. Controllability and observability. Eigenvalues and stability. Liapunov Stability. Quadratic performance criteria and optimal control. Maximum principle and dynamic programming.
 Lectures: 3 hours per week, first term.
- 175 Mechanical Stress Analysis.** **R. Neemeh**
 Advanced stress analysis, statically indeterminate beams, torsion, combined torsion and bending, plates, shells and cylinders. Rotating disks, energy methods.
 Lectures: 2 hours per week, second term.
 Labs: 3 hours per week, second term.
 References: Timoschenko, S., "Elementary Theory & Problems", Part II, 3rd Ed., Van Nostrand.
- 176 Nonlinear Control Systems.** **V. Stefanovic**
 Describing Functions, phase plane techniques. Systems with backlash dead-band, and saturation. Relay controllers. Mathieu equation. Stability: limited cycles, sustained oscillations. Liapunov's Stability.
 Lectures: 3 hours per week, second term.
- 177 Computer Aided Design II.** **B. Desai**
 Application of simulation languages to typical engineering problems and to engineering management. Project control techniques such as CPM, PERT and PERT/COST are discussed. The important portions of the course involves the analysis and solution of a representative class of problems by the student using the digital computer.
 Lectures: 3 hours per week, first term.
 Labs: 3 hours per week, first term.

ENGINEERING DESIGN

- 234 Mechanical Design and Stress Analysis.** **R. Neemeh, H. Wardell, S.J.**
 Stress Analysis, combined stresses, Mohr's circle, beams columns, curved beams stress concentration, fatigue impact, bolted, rivetted and welded connections. Machine Design, screws, fasteners, cams, shafts. The first term laboratory work concentrates on Mechanical Drawing; the second term concentrates on design projects.
 Lectures: 2 hours per week, both terms
 Labs: 3 hours per week, both terms.
 References: Timoshenko, S., "*Strength of Materials*", Part I, 3rd. Ed. French, T.E., & Vierck, C.J., "*Engineering Drawing*", 9th Ed., McGraw-Hill. Faires, V., "*Design of Machines Elements*", 4th Ed., MacMillan.
- 235 Structural Design I.** **C. Goldman**
 Design of tension, compression and flexural members in steel and timber; specifications and codes; riveted, bolted, and welded details; building frames.
 Lectures: 2 hours per week, second term.
 Labs: 3 hours per week, second term.
- 267 Mechanical Design.** **R. Neemeh**
 Design of gears, gear trains, couplings, clutches, brakes, springs. Theory of lubrication and bearings. Design projects.
 Lectures: 2 hours per week, first term.
 Labs: 3 hours per week, first term.
 Text: Faires, V., "*Design of Machine Elements*", 4th Ed., MacMillan.
- 268 Structural Design II.** **C. Goldman**
 Design projects; railway and highway bridges; rigid frames.
 Lectures: 2 hours per week, second term.
 Lab: 3 hours per week, second term.
- 269 Reinforced Concrete.** **C. Goldman**
 Analysis and design of beams, slabs, and columns; building frames; elastic and ultimate strength design.
 Lectures: 2 hours per week, second term.
 Lab: 3 hours per week, second term.

PROFESSIONAL PRACTICE

- 311 Professional Practice.**
 The place of the Engineer in the business world, how companies are organized and run. Consulting engineering and types of organization responsibilities. Engineering economics.
 Lectures: 1 hour per week, both terms.
- 367 Technical Project.** **Staff**
 A laboratory program designed to combine analytical, computational and laboratory techniques in the synthesis of typical engineering devices or sub-systems. Independent design project, selected under staff guidance in first term, terminating in a major technical report.
 Labs: 3 hours per week, first term.
 6 hours per week, second term.
- 368 Cost Engineering.** **M. Kilbertus**
 Elements of cost estimation. Techniques of quantity take-offs and pricing, indirect costs, engineering costs. Techniques of cost control and its importance in projects. Timely forecasting of cost under-runs and over-runs. Analysis of profitability of projects. Economic evaluation techniques & investment return. Examination of typical projects where cost engineering techniques are being applied.
 Lectures: 3 hours per week, both terms.

CIVIL ENGINEERING

- 534 Surveying.** **W. Cosgrove**
 Types of survey; description and use of level, compass, transit, chain and tape; levelling; traverses, stadia. Route surveys involving simple, spiral, and vertical curves. Grades, cross-sections, area, and earth-work calculations. Use of planimeter; Triangulation; Hydrographic surveying.
 Lectures: 2 hours per week, first term.
 Lab: 2 hours per week, first term.
- 567 Soil Mechanics and Foundations.** **G. Douglas**
 Soil properties and structure; sub-surface exploration methods; bearing capacity of soils, soil strength; settlement and consolidation; slope stability; groundwater and seepage; lateral earth pressure theories, design of retaining walls and footings; foundation types.
 Lectures: 3 hours per week, both terms.
 Lab: 3 hours per week, first term.

568 Transportation Engineering.

Introduction to highway, airport and railway engineering; traffic studies; transportation planning and economics; Geometric design of highways; earthwork and drainage.

Lectures: 2 hours per week, first term.

Lab: 2 hours per week, first term.

569 Sanitary Engineering.

Biological and chemical principles of water and air pollution; industrial waste disposal.

Lectures: 2 hours per week, second term.

Lab: 2 hours per week, second term.

570 Management and Specifications.

Contracts, Agreements and Specification writing; industrial relations; engineers' responsibility and professional ethics.

Lectures: 2 hours per week, first term.

571 Town Planning.

Elements of town planning; environmental studies; traffic engineering; geometric design of streets; materials of pavement construction.

Lectures: 2 hours per week, second term.

Lab: 3 hours per week, second term.

572 Municipal Engineering.

Water supply; water distribution systems; water purification; sewage treatment and disposals; storm drainage.

Lectures: 2 hours per week, first term.

ELECTRICAL ENGINEERING**621 Circuit Analysis and Energy Conversion.****S. Kubina**

The fundamentals of the analysis of linear circuits to study time varying, periodic and non-periodic currents, and voltages; node and loop analysis; network theorems; time frequency domain relationships; polyphase circuits. Fourier series, Laplace transforms; coupling elements and couples circuits; ideal transformers; controlled sources. Semiconductor electronics. Simple amplifier circuits, frequency response. Simple rectifier and modulator circuits.

Lectures: 2/3 hours per week, both terms.

Lab: 3 hours per week, both terms.

631 Circuit Analysis.**D. Kaufman**

Analysis of the response of linear circuits to steady and time varying current and voltages; node and loop analysis; network theorems; Laplace transforms; polyphase circuits.

Lectures: 2 hours per week, one term.

Lab: 3 hours per week, one term.

632 Electrical Engineering.**S. Kubina**

Balanced three phase power systems. Magnetic Theory: Ampere's Law, Magnetic Flux, Hysteresis. Characteristics of Transformers, Induction, Synchronous and D.C. Machines. Transistors and their equivalent circuits. Multistage Transistor Amplifiers. Rectifiers; some application of electronic circuits. Logic Circuits. Basis of Control Systems. Analog Simulation.

Lectures: 3 hours per week, second term.

Lab: 3 hours per week, second term.

635 Electronic Circuits and Devices.**S. Ahad**

Device equivalent circuit representations; bias-stabilized transistor amplifiers, frequency response of amplifiers, feed back amplifiers, oscillators, tuned circuits, wide-band amplifiers, multivibrators, pulse circuits, gates and switches, integrated circuits. Modulation and detection circuits.

Lectures: 3 hours per week, first term.

Labs: 3 hours per week, first term.

636 Network Analysis.**S. Kubina**

Coupling elements and coupled circuits; polyphase circuits. Introduction to network topology; Fourier series and Fourier-Laplace integral representation for signals; convolution integral; time-frequency domain relationships; network functions; parameters of two-port networks; filter theory; systems with distributed parameters.

Lectures: 3 hours per week, first term.

637 Electrical Machines I.**V. Stefanovic**

Magnetically coupled coils. Iron core transformer. Signal and multiple excited machines. Electromechanical transducers. Application of generalized machine theory to the steady-state and transient analysis of DC, synchronous and induction machines.

Lectures: 3 hours per week, first term.

Labs: 3 hours per week, first term.

- 638 Electromagnetic Theory.** **S.J. Kubina**
Electrostatic fields, Coulomb's Law, Gauss' Law, Poisson and Laplace equations. Boundary value problems. Magnetostatic field, Ampere's and Biot-Savart laws. Maxwell's equations. Uniform plane wave, reflection and refraction, the transmission line.
Lectures: 3 hours per week, second term.
- 639 Solid State Physics.** **C. Adkar**
Elementary crystal structure. Waves in periodic media. Lattice vibrations. Free electron models. Thermionic emission. Energy bands. Semiconductors, conduction by holes and electrons, doping, junctions. Magnetic and dielectric properties of solids.
Lectures: 3 hours per week, second term.
- 640 Switching Circuits.** **M. Marin**
Digital measurements, switching devices; diode and transistor circuits, switching logic and logic gates; memory elements and multi-vibrations; counters registers and read-outs; digital and analogue-digital instruments and systems. Applications to digital systems, design and interface.
Lectures: 2 hours per week, second term..
Labs: 3 hours per week, second term.
- 667 Communication Systems.** **S. Rauch**
Mathematical representation for signals. Laplace transforms, series expressions. Fourier transforms, amplitude and phase spectra, convolution and correlation methods, signal sampling. Amplitude, frequency and phase modulation, demodulation, suppressed band systems, multiplexing, noise spectra, signal detection in the presence of noise.
Lectures: 3 hours per week, first term.
- 671 Control and Instrumentation Circuits and Devices.** **V. Stefanovic**
Analysis and design principles of electrical systems for measurement, instrumentation and control. Review of basic devices and circuits used in instrumentation, including transducers. Study of operational amplifiers, regulators, modulators and demodulators, servomotors, selsins, analog and digital gates.
Lectures: 3 hours per week, second term.

- 672 Electromotor Systems.** **V. Stefanovic**
Practical approach to the design of electromotor drives: selecting the motor for a given load cycle; dynamics of E-M drives. Methods of speed regulations in AC and DC motors, power regulating devices (such as SCRs) and their compatibility with various E.M drives.
Lectures: 3 hours per week, second term.
Labs: 3 hours per week, second term.
- 673 Electrical Machines II.** **V. Stefanovic**
Nonlinearities in E1. Machines. More detailed study of transients. Synchronous machine under various loads. Dynamic performance of electrical machines including rotating amplifiers in feed back system.
Lectures: 3 hours per week, both terms.
- 674 Electromagnetic Transmission and Radiation.** **S. Kubina**
Wave propagation in continuous media and their dispersion relations; energy and energy flow associated with wave propagation in passive and active media; coupling of modes and general stability criteria; waveguides; cavities; transmission lines; standing wave; antennas; radiation; coupled transmission systems.
Lectures: 3 hours per week, first term.
Labs: 3 hours per week, first term.
- 676 Solid State Devices and Integrated Circuit Systems.** **C. Adkar and E. Ahad**
Devices of current interest: field-effect transistors, tunnel diodes, SCR, integrated circuits. Physical phenomena for special solid-state devices, thermoelectric effects, lasers, superconductivity, device fabrication techniques, device applications.
Lectures: 3 hours per week, second term.
Labs: 3 hours per week, second term.
- 677 Acoustics.** **S. Kubina**
Sound generation and propagation in elastic media; conversion between acoustical, electrical, and mechanical energy. Lumped-parameter approximations, sound in rooms, underwater acoustics, microphones; loudspeakers and audio communications problems; noise and vibration control problems.
Lectures: 3 hours per week, second term.
Labs: 2 hours per week, second term.

MECHANICAL ENGINEERING

- 735 Planning and Technology of Manufacturing.** **P. Kunstadt**
 Review of metals used in industry; their properties and fabricating characteristics; plastics; castings; forgings; welding; cold forming; cutting tools; machine tools; automation and numerical control; inspection and quality control; planning and machine loading.
 Machine shop practice: planning and machine loading; machining of components; hardfacing and welding; grinding and lapping; inspection, assembly and testing; tool layout, setup of fully automatic transfer machine; setup of N.C. machine tool.
 Lectures: 2 hours per week, second term.
- 736 Thermodynamics I** **K. Krakow**
 Thermodynamic concepts, properties, processes, laws and cycles; first law of thermodynamics and its application to non-flow, quasistatic, and flow processes; non-reacting and reacting mixtures, psychometrics, adiabatic flame temperature, vapour and air standard cycles, reciprocating compressors. Introduction to the second law of thermodynamics.
 Lectures: 3 hours per week, first term.
 Text: Van Wylen, G.J. & Sonntag, R.E., "Fundamentals of Classical Thermodynamics," Wiley.
- 737 Fluid Mechanics I** **K. Krakow**
 Properties of fluids, hydrostatics, incompressible flow, continuity, conservation of momentum, conservation of energy, concept of laminar and turbulent flow; flow in pipes; open channel flow.
 Lectures: 3 hours per week, second term.
 Text: Streeter, V.L., "Fluid Mechanics", 4th Ed., McGraw-Hill.
- 767 Experimental Engineering.** **R. Neemeh**
 Theory and use of instruments; measurements of temperature; pressure, fluid flow, power; displacement, acceleration; use of stroboscope, error analysis.
 Lectures: 1 hour per week, first term.
 Labs: 3 hours per week, first term.
 Reference: Holman, J.P., "Experimental Method for Engineers", McGraw-Hill.
- 768 Mechanical Engineering Laboratory.** **R. Neemeh**
 Experiments relating to thermodynamics, fluid mechanics and heat transfer. Testing of mechanical equipment, fans, reciprocating compressor, boiler, steam turbine, open channel flow, heat exchanger, etc.
 Labs: 3 hours per week, second term.

- 769 Thermodynamics II.** **R. Neemeh**
 Second law of thermodynamics, Clausius inequality, Maxwell equations, Clapeyron equation, Rankine, reheat and regenerative cycles, Joule-Brayton cycle, vapour compression refrigeration cycle, gas turbines, internal combustion engines, steam turbines, combustion with dissociation.
 Lectures: 3 hours per week, first term.
 Text: Van Wylen, G.J. & Sonntag, R.E., "Fundamentals of Classical Thermodynamics", Wiley.
- 770 Fluid Mechanics II.** **K. Krakow**
 Subsonic and supersonic compressible flow; potential flow theory, boundary layer theory, flow through turbomachinery, air foil theory.
 Lectures: 3 hours per week, second term.
 Text: Streeter, V.L., "Fluid Mechanics", 4th Ed., McGraw-Hill.
 Reference: Schlichting, H., "Boundary Layer Theory", 6th Ed., McGraw-Hill.
- 771 Heat Transfer.** **R. Neemeh**
 Steady state and transient conduction; radiation; free and forced convection; boiling and condensation; heat exchange, systems with heat sources, extended surfaces.
 Lectures: 2 hours per week, second term.
 Text: Kreith, F., "Principles of Heat Transfer", 2nd edition, International Textbook Co.
- 772 Applied Thermodynamics.**
 Thermodynamics, fluid mechanics and heat transfer concepts are applied to the analysis and design of propulsion systems, environmental control systems and power plants. Optimum design of systems, selection and matching of components.
 Lectures: 3 hours per week, second term.
 References: Wood, B.D., "Application of Thermodynamics", Addison Wesley.
- 773 Fluid Machinery.**
 Dimensional analysis and similtude. Operating characteristics of pumps, fans, compressors and turbines. Matching of components and analysis of systems.
 Lectures: 3 hours per week, first term.
 References: Shepherd, D.G., "Principles of Turbomachinery", MacMillan.

MATERIALS SCIENCE

801 Materials Science.

J.E. Orr

A systematic approach to the study of properties and behaviour of engineering materials, including the fundamental properties of materials, metallic phases, multiphase intervals, structural effects on properties, stability under service stresses; thermal, electrical, chemical properties and corrosion; organic and non-metallic materials.

Lectures: 2 hours per week for two terms.

834 Metallurgy for Engineers.

J.E. Orr

A systematic approach to metallurgy including the recrystallization recovery, grain growth, phase diagrams, eutectic systems, intermediate phases and precipitation hardening, non-ferrous metals. The course will cover in detail iron-carbon alloys, cast irons, T-T-T diagrams, properties of quenched and tempered steels and methods of surface hardening.

Lectures: 2 hours per week, first term.

EXISTING PROGRAM

FINAL PRESENTATION 1971 - 1972

*FOURTH YEAR – CIVIL ENGINEERING – DESIGN

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
STRENGTH OF MATERIALS II	E-034	50	2	—	—	—
MECH. OF MACHINES	E-054	50	3	—	—	—
STRUCTURAL ANALYSIS	E-174	100	1	1	2	2
STRUCTURAL DESIGN	E-214	150	2	2	3	3
SOIL MECHANICS	E-524	75	—	2	—	3
THERMODYNAMICS AND FLUID MECHANICS	E-714	150	2	2	2	2
MECH. ENGINEERING LAB.	E-734	50	—	—	—	3
PHILOSOPHY	—	100	2	2	—	—
TOTAL		725	12	9	7	13

*Terminates in 1971/72

034 Strength of Materials II.

C. Goldman

Unsymmetrical Bending, shear centre; curved beams; beams on continuous elastic supports; energy methods; failure theories.

Lectures: 2 hours per week, first term.

174 Structural Analysis.

C. Goldman

Analysis of statically indeterminate structures, moment distribution, slope deflection, virtual work, and strain energy; deflection analysis; influence lines; collapse methods.

Lectures: 1 hour per week, both terms.

Labs: 2 hours per week, both terms.

214 Structural Design.

C. Goldman

Design of tension, compression and flexural members in steel and timber; specifications and codes; riveted, bolted, and welded details; building frames; design of belt and chain drives, gears, shafts; stress concentration, fatigue, impact.

Lectures: 2 hours per week, two terms.

Labs: 3 hours per week, two terms.

524 **Soil Mechanics.** Mrs. Douglass

Soil properties and structure; subsurface exploration methods; bearing capacity of soils, soil strength, settlement and consolidation; slope stability; groundwater and seepage: lateral earth pressure theories, design of retaining walls, and footings; foundation types.

Lectures: 2 hours per week, one term.

Labs: 3 hours per week, one term.

***FOURTH YEAR – ELECTRICAL ENGINEERING –
“A” – DESIGN**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
CNTL. & SIMUL. LAB.	E-124	75	—	2	—	3
CONTROL SYSTEMS	E-134	75	3	—	—	—
ELECTRONIC CIRCUITS & DEVICES	E-624	100	—	3	—	3
SIGNAL PROCESSING	E-654	75	—	3	—	—
ELECTRICAL MACHINES	E-664	75	2	—	3	—
ELEC. MAG. THEORY	E-674	100	3	—	—	—
SWITCHING CIRCUITS	E-684	75	2	—	3	—
THERMODYNAMICS & FLUID MECHANICS I	E-714	150	2	2	2	2
PROBABILITY & STATISTICS	M-317	50	—	3	—	—
PHILOSOPHY	—	100	3	3	—	—
TOTAL		875	15	16	8	8

* Terminates in 1971/72.

***FOURTH YEAR – ELECT. ENGINEERING –
“B” – COMPUTATION**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
CNTL. & SIMUL. LAB.	E-124	75	—	2	—	3
CONTROL SYSTEMS	E-134	75	3	—	—	—
INTRODUCTION TO DIGITAL COMPUTER ENG.	E-154	100	2	2	—	—
DIGITAL COMPUTER APP. IN ENGINEERING	E-164	125	2	2	3	3
SWITCHING CIRCUITS	E-684	75	2	—	3	—
THERMODYNAMICS & FLUID MECHANICS I	E-714	150	2	2	2	2
PROBABILITY & STATISTICS	M-317	50	—	3	—	—
PHILOSOPHY	—	100	3	3	—	—
**ELECTIVE	—	—	—	—	—	—
TOTAL		750	14	14	8	8

*Terminates in 1971/72.

**elect to take an additional course such as P-203, E-624, EC-300, EC-310.

124 **Control & Simulation Laboratory.** D. Kaufman

Measurements on control systems; modelling of control and physical systems; fundamentals of analogue computation; analogue computer simulation of engineering systems.

Lectures: 2 hours per week, second term.

Lab: 3 hours per week, first term.

134 **Control Systems.** V. Stefanovic

Mathematical Methods; Nonlinearity and Linearization. Open and Closed-Loop Control Sensitivity. Stability and performance criteria. System design by complex plane and frequency response techniques.

Lectures: 3 hours per week, first term.

Text: *Modern Control Systems*, R.C. Dorf.

- 154 Introduction to Digital Computer Engineering.** **C. Ahooja**
 Fundamental concepts; switching algebra, number systems, codes, arithmetic operations, and principles of logical design. Computer arithmetic and control units, computer memories, stored-program computers. Problem formulation, coding and programming concepts, computer system organization. Examples shall be taken from modern general-purpose computers.
 Lectures: 2 hours per week, both terms.
- 164 Modern Systems Methods.** **B. Desai**
 The course is designed to provide adequate foundations for applying systems engineering methods to various disciplines. Selected topics in numerical algorithms, methods of optimization of deterministic models, simulation of continuous systems and their application to representative problems. A large part of the course involves the analysis and solution of problems using student-developed packages as well as the standard scientific software.
 Lectures: 2 hours per week for two terms.
 Problems: 3 hours per week for two terms.
- 624 Electronic Circuits and Devices.** **E. Ahad**
 Device equivalent circuit representations; bias-stabilized transistor amplifiers, frequency response of amplifiers, feedback, amplifiers, oscillators, tuned circuits, wide-band amplifiers, multivibrators, pulse circuits, gates and switches, integrated circuits. Modulation and detection circuits.
 Lectures: 3 hours per week, second term.
 Lab: 3 hours per week, second term.
- 641 Electrical Engineering.** **V. Stefanovic**
 Balanced three phase power systems. Magnetic Theory: Ampere's Law, Magnetic Flux, Hysteresis, Characteristics of Transformers, Induction, Synchronous and D.C. Machines. Transistors and their equivalent circuits. Multistage Transistor Amplifiers. Rectifiers; some application of electronic circuits. Logic Circuits. Basis of Control Systems. Analog Simulation.
 Lectures: 3 hours per week, second term.
 Lab: 3 hours per week, second term.

- 654 Signal Processing.** **S. Rauch**
 Mathematical representation for signals. Laplace Transforms, series expressions, Fourier transforms, amplitude and phase spectra, convolution and correlation methods, signal, sampling. Amplitude, frequency and phase modulation, demodulation, suppressed band systems, multiplexing, noise spectra, signal detection in the presence of noise.
 Lectures: 3 hours per week, second term.
 Ref: Lathi, "Signals, Systems and Communications". Javid & Brenner, "Analysis, Transmission and Filtering of Signals."
- 664 Electrical Machines.** **V. Stefanovic**
 Magnetic Theory: Ampere's Law, Magnetic Flux, Hysteresis. Transformers: Magnetic Coupling, Phasor Diagram, Equivalent Circuits, Characteristics and Testing. Magnetic Amplifiers. Rotating Electrical Machines: Study of characteristics of the induction, synchronous and D.C. Machines.
 Control Type Machines: Amplidyne. Applications. Speed Controlled Electromotor Drives.
 Lectures: 2 hours per week, first term.
 Lab: 3 hours per week, first term.
- 674 Electromagnetic Theory.** **C. Adkar**
 Electrostatic fields, Coulomb's Law, Gauss' Law, Poisson and Laplace equations. Boundary value problems. Magnetostatic fields, Ampere's Laws, Biot-Savart Law. Time varying fields, Maxwell's equations. Reflection and refraction of plane waves.
 Lectures: 3 hours per week, first term.
- 684 Switching Circuits.** **M. Marin**
 Digital Measurements, switching devices; diode and transistor circuits, switching logic and logic gates; memory elements and multi-vibrators; counters, registers and read-outs; digital and analog-digital instruments and systems. Applications to digital systems, design and interface.
 Lectures: 2 hours per week, first term.
 Lab: 3 hours per week, first term.

***FOURTH YEAR – MECHANICAL
ENGINEERING – "A" – DESIGN**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
MECH. of MACH. II	E-054	50	3	—	—	—
SYSTEMS ANALYSIS	E-103	100	2	2	—	—
ADV. SYSTEMS ANALYSIS	E-113	50	—	2	—	—
CONTROL SYSTEMS	E-134	75	3	—	—	—
MECHANICAL DESIGN II	E-204	150	2	2	3	3
ELECTRICAL ENGINEERING	E-641	100	—	3	—	3
EXP. ENGINEERING	E-704	50	1	—	2	—
THERMODYNAMICS & FLUID MECHANICS II	E-724	150	2	2	2	2
MECH. ENGINEERING LAB.	E-734	50	—	—	—	3
HEAT TRANSFER	E-753	50	—	2	—	—
PHILOSOPHY	—	100	3	3	—	—
TOTAL		925	16	16	7	11

*Terminates in 1971/72.

***FOURTH YEAR – MECHANICAL ENGINEERING – "B"
INDUSTRIAL ENGINEERING**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
CONTROL SYSTEMS	E-134	75	3	—	—	—
MECH. DESIGN II	E-204	150	2	2	3	3
HEAT TRANSFER	E-753	50	—	2	—	—
ELEC. ENGINEERING	E-641	100	—	3	—	3
EXP. ENGINEERING	E-704	50	1	—	2	—
THERMODYNAMICS & FLUID MECHANICS I	E-714	150	2	2	2	2
METAL. FOR ENGRS.	E-834	50	2	—	—	—
ENG. MATHS.	M-314	100	2	2	—	—
INTR. BUS. ANAL.	B-312	100	3	3	—	—
CAN. ECON. ENVIR.	B-215	50	—	3	—	—
PHILOSOPHY	—	100	3	3	—	—
TOTAL		975	18	20	7	8

*Terminates in 1971/72.

***FOURTH YEAR – MECHANICAL ENGINEERING – "C"
ENGINEERING ADMINISTRATION**

COURSE	Course Number	Wgtd. Mark	Lec. Hrs. pr/wk		Labs. Hrs. pr/wk	
			1st Term	2nd Term	1st Term	2nd Term
CONTROL SYSTEMS	E-134	75	3	—	—	—
HEAT TRANSFER	E-753	50	—	2	—	—
ELECTRICAL ENGINEERING	E-641	100	—	3	—	3
THERMODYNAMICS & FLUID MECHANICS	E-714	150	2	2	2	2
INTR. BUS. ANALY.	B-312	100	3	3	—	—
CAN. ECON. ENVIR.	B-215	50	—	3	—	—
OPERATIONS ANALYSIS	B-518	100	3	3	—	—
PRODUCT MANAGEMENT	B-470	100	3	3	—	—
PHILOSOPHY	—	100	3	3	—	—
TOTAL		825	17	22	2	5

*Terminates in 1971/72.

- 054 Mechanics of Machines II.** K.I. Krakow
Vibrations, free, forced, damped; systems having single and multiple degree of freedom; torsional vibration of shafts, critical speed of shafts, flywheel calculations.
Lectures: 3 hours per week, first term.
- 103 Systems Analysis.** K.I. Krakow
The application of Mathematics to the solution of Civil, Electrical and Mechanical Engineering problems. Systems of single and multiple degrees of freedom; gyroscopic motion; particle mechanics; theory of fields; unit functions; analogies between mechanical and electrical systems. Laplace Transform methods.
Lectures: 2 hours per week, both terms.
- 113 Advanced Systems Analysis.** K.I. Krakow and J. Krantzberg
Application of matrix methods to problems in vibrations; application of numerical methods to problems in fluid mechanics.
Lectures: 2 hours per week, second term.
- 204 Mechanical Design II.** R. Neemeh
Design factors, stress concentration, fatigue, impact; design of belt and chain drives, gears, shafts, bolted, riveted and welded connections, beams (curved and straight) and columns. Design problems related to mechanical engineering involving the application of the theoretical work of Strength of Materials and Mechanics of Machines.
Lectures: 2 hours per week, both terms.
Lab: 3 hours per week, both terms.
- 704 Experimental Engineering.** K.I. Krakow, R. Neemeh
Theory and use of instruments; measurements of temperature, pressure, fluid flow, power; error analysis; displacement, acceleration; use of stroboscope.
Lectures: 1 hour per week, first term.
Lab: 2 hours per week, first term.
- 714 Thermodynamics and Fluid Mechanics I.** K.I. Krakow
Dimensional analysis; thermodynamics concepts, properties, processes laws and cycles; non-reacting and reacting mixtures; properties of fluids hydrostatics, incompressible flow, continuity conservation of momentum, conservation of energy, concept of laminar and turbulent flow; flow in pipes; open channel flow. Introduction to heat transfer and heat exchanges.
Lectures: 2 hours per week, both terms.
Problems: 2 hours per week, both terms.

- 724 Thermodynamics and Fluid Mechanics II.** K.I. Krakow, R. Neemeh
Thermodynamics relationships, advanced problems involving cycles and the first and second laws; similitude; subsonic and supersonic compressible flow; potential flow theory, boundary layer theory, fluid machinery.
Lectures: 2 hours per week, both terms.
Problems: 2 hours per week, both terms.
- 734 Mechanical Engineering Laboratory.** K.I. Krakow, R. Neemeh
Experiments relating to thermodynamics, fluid mechanics and heat transfer. Testing of mechanical equipment fans, Diesel engine, reciprocating compressor, boiler, steam turbine, open channel flow, heat exchanger, etc.
Lab: 3 hours per week, second term.
- 753 Heat Transfer.** R. Neemeh
Steady state and transient conduction; radiation; free and forced convection; boiling and condensation; heat exchanges.
Lectures: 2 hours per week, second term.
- 834 Metallurgy for Engineers.** J.E. Orr
A systematic approach to metallurgy including the recrystallization recovery, grain growth, phase diagrams, eutectic systems, intermediate phases and precipitation hardening, non-ferrous metals. The course will cover in detail iron-carbon alloys, cast irons, T-T-T diagrams, properties of quenched and tempered steels and methods of surface hardening.
Lectures: 2 hours per week, first term.

ENGLISH

Department Chairman (Acting) Joanne P. Zuckermann

* Courses leading to an Honours B.A. in English

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
English (2 half or 1 full) from 400, 401A, 403A, 405B, 407B)	English English English	English English English
English*	Elective	Elective
English Elective	Elective**	Elective**
Elective		

** These electives may have to be taken from a specified list of courses approved by Senate.

* The Honours program in English will have two formats, one to be called "Standard Honours", the other to be called "Elective Honours." Students in Honours English will take nine courses, 3 in each full year of study.

Standard Honours Program: This program is recommended especially for students who plan to enter graduate school. It outlines a broad, historical coverage of periods and genres.

- 1 Genre (two half courses or 1 full course chosen from 400, 401A, 403A, 405A, 407B)
- 1 Shakespeare (chosen from 418, 420, 422).
- 1-1/2 pre-17th Century (chosen from 408, 410, 411A, 413A, 415B, 417B, 424)
- 1-1/2 17th and 18th centuries (at least a half course in either period chosen from 417B, 424, 425A, 427B, 429A, 431B, 432, 433A, 435B)
- 1 19th century (chosen from 436, 437A, 439B, 441A, 443B, 444, 445B)
- 1 American, Canadian, 20th century (chosen from 446, 448, 449A, 451B, 452, 454)
- 2 Electives from Honours or Majors, or general Arts offerings, or from approved interdisciplinary and related studies.

Elective Honours Program: This program assures an adequate foundation in English Literature, but it is particularly directed to students who wish to take a concentration of courses in areas of special interest to them. Honours students may take this program by explaining their special interests to an adviser during their first year who will approve their taking this program and counsel them.

- 4 Courses in pre-20th century English literature, distributed into four centuries. A course in Shakespeare may not count as a century course.
- 5 Electives from Honours or Majors or general Arts offerings, including up to two from approved interdisciplinary or related studies.

Courses leading to a B.A. with a Major in English*

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
English (2 half or 1 full course from 400, 401A, 403A, 405B, 407B)	English English Elective	English English Elective
English*	Elective	Elective
English Elective	Elective**	Elective**
Elective		

*Students who are in the Majors program in English will take seven courses, three in their first year, two in each of the following years.

- 1 Genre (two half courses or 1 full course chosen from 400, 401A, 403A, 405B, 407B)
- 1 Shakespeare (chosen from 418, 420, 422).
- 2 Pre-19th Century courses in two different centuries (chosen from list of Honours and Majors courses).
- 3 Electives from Honours or Majors or General Arts offerings.

**These electives may have to be taken from a specified list of courses approved by Senate.

The fourth year of the old English Programmes will be found on pages 274 f.

COURSES FOR GENERAL ARTS STUDENTS: ELECTIVES FOR HONOURS AND MAJORS.

300 Critical Reading. Full Course. A.G. Hooper.

The aim of this course will be, through the examination of various kinds of discourse, to encourage and develop in students the ability to read critically.

Lectures: 3 hours per week for two terms.

301A Comedy: Half Course. First Term. L. Corwin.

An examination of the techniques and theories of comedy as seen in selected readings in 18th, 19th, 20th century English and American literature.

Lectures: 3 hours per week, first term.

- 302 Rhetoric. Full Course. G.MacGuigan, S.J.**
 An inquiry into the nature and function of Rhetoric (classical and "New"), and of rhetorical criticism; a study of the fundamentals, and some of the refinements, of prose style; logical and rhetorical analysis, and original compositions.
 Lectures: 3 hours per week for two terms.
 Texts: *Rhetoric*: Aristotle (Lane Cooper translation)
The Essentials of Structural English: Whitehall.
The Province of Rhetoric: Schwartz and Rycenga.
- 303A Understanding Drama: Shakespeare. Half Course. First Term. R.M.Philmus**
 A limited number of Shakespeare's dramas will be studied as literature, with a view towards defining the problems of understanding them.
 Lectures: 3 hours per week, first term.
- 306 Shakespeare. Full Course. A. Newell**
 Shakespeare's plays - histories, tragedies, comedies - will be studied in relation to the Elizabethan theatre and its tradition, and in relation to the social, historical and literary setting. An emphasis will be placed on appreciating each play as an individual creation. Some plays will be given a dramatic reading in class. Students will attend performance of Shakespeare plays that may be presented in Montreal during the course of the term.
 Lectures: 3 hours per week for two terms.
- 308 Studies in Dramatic Form. Full Course. A. Drew-Bear**
 Lectures: 3 hours per week, for two terms.
- 309A Literary Theatre in Theory and Practice. Half Course. First Term.**
 This course will be set up for students interested in drama as theatre. The class will be organized into small cells composed of students interested in acting and directing. These cells will study plays from the point of view of production, and prepare a series of scenes for class workshops. The course will build towards a public performance for the Loyola student body. Entrance to the first semester by permission of the professor.
 Lectures: 3 hours per week, first term.

- 311B Literary Theatre in Theory and Practice. Half Course. Second Term.**
 As above. The first semester of the course is a prerequisite for admission to the second semester.
 Lectures: 3 hours per week, second term.
- 312 The Face of Death. Full Course. G.MacGuigan, S.J.**
 A literary and meditative study of twelve plays and films with a common theme: Henry V, Everyman, Saint Joan, Man for all Seasons, Hamlet, Murder in the Cathedral, Waiting for Godot, Riders to the Sea, Death of a Salesman, The Cocktail Party, *High Noon, *Survivors.
- 313B Drama: Tragedy. Half Course. Second Term.**
 A study of major tragedies from the Renaissance to Modern Times aimed at understanding what the tragic vision is and the various forms it has taken. Tragedies will be selected from the works of Marlowe, Shakespeare, Webster, Racine, Rowe, Goethe, Schiller, Kleist and several modern figures.
 Lectures: 3 hours per week, second term.
- 314 Time and the Drama. Full Course. J.P.Zuckermann**
 It is always now in the theatre; but the audience will only sit there for a limited time. This course will examine the influence on the drama of its conditions of performance - its immediacy and the practical limitations on the length of a play. Attention will be given both to the peculiarities of dramatic form and to the resultant interest in time as a theme. Examples will be drawn from a wide range of periods and types, including, for instance, the *Agamemnon*, *A Winter's Tale*, *The Tempest*, *The Way of the World*, *Murder in the Cathedral* and *Waiting for Godot*.
 Students enrolled in this course will be divided into three groups: each group will meet once a week for one and a half hours.
- 316 The Rise of Prose Fiction. Full Course. M. R. Philmus**
 The course will explore the origin and development of European fiction in major works of the Middle Ages and the Renaissance, giving particular attention to their varying sources of inspiration, the narrative technique they evolve, and the basic genres they establish.
 Lectures: 3 hours per week for two terms.

- 318 Epic Forms in Modern Fiction. Full Course. M. R. Philmus**
The course is designed to examine epic structures and modes in representative work of English and American fiction of the nineteenth and the twentieth centuries.
Lectures: 3 hours per week for two terms.
- 320 Twentieth Century British Literature. Full Course. K. Waters.**
Works by Conrad, Shaw, Lawrence, Joyce, Virginia Woolf, Yeats, Eliot, Waugh, John Osborne, Doris Lessing, Alan Sillitoe, Samuel Beckett, Harold Pinter. The impact of psychology, and other social sciences, of the decline of Christianity, of the development in existentialism of new political and social structures, upon subject matter and technique. Some dominant themes will be: the alienation of the individual; new presentations of woman; man-woman relationships; the role of violence; heroes, anti-heroes, forms of the absurd; the role of art.
Lectures: 3 hours per week for two terms.
- 322 Modern British Fiction. Full Course. A. T. Broes**
Beginning with Thomas Hardy, the course will focus on major authors and trends in the twentieth century British novel. Other authors read will include: Conrad, Forster, Woolf, Lawrence, Greene, Cary, Snow and Burgess.
Lectures: 3 hours per week for two terms.
- 324 Contemporary American Fiction. Full Course. A. T. Broes**
In addition to demonstrating the influence of Hemingway and Faulkner on post World War II, American fiction (one novel by each of these authors will be read), the course will focus on the continued variety and vitality of the recent American novel. Other authors read will include: Styron, Ellison, O'Connor, Bellow and Updike.
Lectures: 3 hours per week for two terms.
- 326 The Psychological Novel. Full Course. L. P. Nowicki**
Study of the development of the modern psychological novel from the nineteenth century to the present, with emphasis upon the interrelationship between psychology and literature. Part of the course will focus on material other than the novel. Close analysis of the tendency to portray the subjective world by means of dream, interior monologue, and stream of consciousness will be stressed.
Lectures: 3 hours per week for two terms.

- 327B Twentieth Century American Literature. Half Course. Second Term. L. P. Nowicki**
A selective study of major fictional works of twentieth century American Literature to be chosen from amongst the following: Anderson, Fitzgerald, Hemingway, West, Steinbeck, Mailer, Kerouac, Ellison and others.
Lectures: 3 hours per week, second term.
- 329A Canadian Poetry. Half Course. First Term. E. Buitenhuis**
An examination of representative works from various periods and trends in Canadian poetry including work by contemporary writers.
Lectures: 3 hours per week, first term.
- 330 Romance, Pastoral, and Satire. Full Course. A. Drew-Bear**
Lectures: 3 hours per week for two terms.
- 332 Psychology and Literature. Full Course. R. Martin**
The first part of the course will be devoted to a development of the basic theories of psychology and psychoanalysis as they are relevant to aesthetics and literary criticism. Unconscious motivation, dream analysis, and a theory of the artist will be developed, largely from readings in Freud. We will then attempt to consider certain works of art in the light of these concepts, concentrating on the example of the Oedipus theme in *Oedipus Rex*, *Hamlet*, and *Sons and Lovers*. The last part of the course will be concerned with archetypes and mythic patterns, drawn from literary and pseudo-literary (fairy tales, children's stories, comic strips) forms. A basic knowledge of psychology would be helpful, but is not a prerequisite.
Lectures: 3 hours per week for two terms.
- 333B The Discovery of the Self in Literature. Half Course. Second Term. L. Corwin.**
An examination of the contexts of and approaches to the discovery of self (e.g., art, nature, religion, society) with the emphasis on a variety of literary forms for the treatment of the theme (e.g., lyric poetry, dramatic monologue, psychological novel, poetic drama, etc.).
Lectures: 3 hours per week, second term.
- 334 Nineteenth Century Poetry and Related Prose. Full Course. R. d'Amato**
Lectures: 3 hours per week for two terms.

336 Women and Literature. Full Course.

We will examine both the woman as she is seen by the male artist: *femme fatale*, *housfrau*, angel and Eve, and women as they see themselves. Authors will include: Flaubert, Lawrence, Hawthorne, Hemingway, Ibsen, the Brontes, Gertrude Stein, Doris Lessing, Simone de Beauvoir, Margaret Atwood.

Lectures: 3 hours per week for two terms.

338 American Literature. Full Course.**A. Newell**

The growth of American literature in its various forms will be surveyed in relation to regional, sociological, ideological, literary and other forces that enter into the emerging patterns of American literature and culture. The best writings from Colonial times to the present will be read.

Lectures: 3 hours per week for two terms.

340 The Novel and its Relation to Twentieth Century Art Theory. Full Course.**D. Taylor**

Lectures: 3 hours per week for two terms.

Restricted to third and fourth year students.

342 Nineteenth Century Fiction. Full Course.**L. Rahm**

Readings in major nineteenth century novelists including Austen, the Brontes, Eliot, Dickens, Meredith, Hardy, Butler and James.

Lectures: 3 hours per week for two terms.

343A Four Modern Poets. Half Course. First Term.**K.E.Waters**

W.B.Yeats, T.S.Eliot, Wallace Stevens, W.H.Auden: The beauty and significance of their response to the human predicament.

Lectures: 3 hours per week, first term.

345A Poetry. Half Course. First Term.**R.Philmus**

An introduction to the methods of reading poetry.

Lectures: 3 hours per week, first term.

346 Literature: Ideas and Myths. Full Course.**R.S.Wareham**

An exploration through literature of some of the myths which generate our ideas and some of the ideas which rationalize our myths. The course has been designed by a committee of three characters: Plato's Socrates, Shakespeare's Antony, and Dostoevsky's Raskolnikov; Antony holds the deciding vote. Essays to be chosen from among the following topics: Pastoral; Tragedy; Epic; Temperance; Courage; Wisdom; Justice; Eros; Madness; Revolution; History (Progress and Cycle); the Individual and the State; Innocence and Experience; Man and Superman; the Function of Art; Creation and Apocalypse; the Masks of God.

Lectures: 3 hours per week for two terms.

Texts: *The Epic of Gilgamesh*, tr. N.K. Sandars (Penguin); *The Republic of Plato*, tr. F.M. Cornford (Oxford); *Amores in Love Poems of Ovid* (New American Library); *The Romance of Tristan and Iseult (Vintage)*; Shakespeare, *Antony and Cleopatra* (Washington Square Press); John Dryden, *Absalom and Achitophel in Dryden*, ed. Reuben A. Brower (Dell); William Blake, *Songs of Innocence and of Experience* and *The Marriage of Heaven and Hell in Blake*, ed. Ruthven Todd (Dell); Marx and Engels, *Manifesto of the Communist Party* (International Publishers); Feodor Dostoevsky, *Crime and Punishment*, tr. Jessie Coulson (Norton); Bernard Shaw, *Saint Joan* (Penguin); Peter Weiss, *The Persecution and Assassination of Jean-Paul Marat as Performed by the Inmates of the Asylum of Charenton under the Direction of the Marquis de Sade* (Pocket Books); *Twentieth Century Engineering* (Museum of Modern Art); Arthur C. Clarke, *2001: a Space Odyssey* (New American Library).

COURSES NORMALLY RESTRICTED TO STUDENTS TAKING HONOURS, OR MAJORING, IN ENGLISH.

400 Genre Course: Practical Criticism. Full Course.**A.G. Hooper**

Through an examination of how language works, in ordinary life as well as in literature, this course will aim at developing discrimination, and a greater understanding and appreciation of linguistic and literary skills.

Lectures: 3 hours per week for two terms.

401A Genre Course: Drama. Half Course. First Term.

A study of drama, focusing on the major movements of the twentieth century, including an examination of realistic drama and the various reactions against it. Plays by Ibsen, Strindberg, Chekhov, Shaw, Pirandello, Lorca, Brecht, Ionesco, Pinter and Albee will be studied in order to explore the nature of drama as a genre.

Lectures: 3 hours per week, first term.

- 403A Genre Course: Fiction. Half Course. First Term. L.P.Nowicki**
A selective study of the novel as form, the works to be chosen from English and American fiction. Close textual analysis, psychic and archetypal patterns, and the development of technique will be emphasized.
Lectures: 3 hours per week, first term.
- 405B Genre Course: Understanding Poetry. Half Course. Second Term. R.M. Philmus**
A course on the concepts and methods of reading poetry, beginning with simple examples and proceeding through poems of graduated difficulty. Recommended for students who would really like to learn how to understand poetry.
Lectures: 3 hours per week, second term.
- 407B Genre Course: The Poem. Half Course. Second Term. K.Waters.**
"back off from this poem
it is a greedy mirror
you are into this poem . from
the waist down
nobody can hear you can they ? "
The purpose of the course is to promote familiarity and enjoyment in poetry as an experience by getting into the language, images, music, architecture, and psychological/social context of a number of short poems.
Lectures: 3 hours per week, second term.
- 408 Medieval Literature. Full Course.**
(Not offered 1971-72).
- 410 Chaucer. Full Course.**
(Not offered 1971-72)
- 411A Chaucer. Half Course. First Term. A.G.Hooper**
A study of *The Canterbury Tales* in general, and of three or four tales in particular.
Lectures: 3 hours per week, first term.
- 413A Spenser and his background. Half Course. First Term M.R.Philmus**
This course is intended to examine Spenser's works - the *Amoretti* and *The Faerie Queene* in particular - and their relations to the pertinent literary traditions, both English and continental.
Lectures: 3 hours per week, first term.

- 415B Elizabethan Prose and Poetry. Half Course. Second Term M.R.Philmus**
Significant works of Elizabethan non-dramatic literature will be studied both as individual creations and as samples of the most important trends in non-dramatic verse and prose of the time.
Lectures: 3 hours per week, second term.
- 417B Elizabethan and Jacobean Drama. Half Course. Second Term. A.G.Hooper**
Representative plays to be read will be selected from the works of some of the following contemporaries of Shakespeare in the golden age of English drama: Kyd, Marlowe, Lyly, Heywood, Jonson, Webster, Tourneur, Marston, Middleton, Beaumont and Fletcher, Massinger, Ford.
Lectures: 3 hours per week, second term.
- 418 Shakespeare. Full Course. A.Newell**
Shakespeare's plays - histories, tragedies, comedies - will be studied in relation to the Elizabethan theatre and its tradition; the social, historical, and literary setting; Shakespeare's development as a dramatic artist; the body of Shakespearian criticism. An emphasis will be placed on appreciating each play as an individual creation intended for staging.
Lectures: 3 hours per week for two terms.
- 420 Shakespeare. Full Course.**
A study of Shakespeare's major plays with the emphasis on Shakespeare as a playwright working within a particular genre intended for stage production. Major tragedies, comedies, and histories will be studied for the purpose of determining how a Shakespearian play originally functioned and what it meant to Shakespeare's contemporaries.
Lectures: 3 hours per week for two terms.
- 422 Shakespeare. Full Course. J.S. Herz**
A close study of a large number of plays of Shakespeare. There will be a strong emphasis on the poetry and on the methods of dramatic characterization and an attempt to explore the idea of theatre the plays contain.
Lectures: 3 hours per week for two terms.
- 424 Nature and Art in Renaissance Literature. Full Course. R.S. Wareham**
(Not offered 1971-72)

ENGLISH

- 425A Milton. Half Course. First Term. J.S.Herz**
A study of Milton's poetry and selected prose with emphasis on *Paradise Lost*.
Lectures: 3 hours per week, first term.
- 427B Seventeenth Century Poetry. Half Course. Second Term. J.S.Herz**
A study of the poetry of Jonson, Donne, Herbert and Marvell with some attention given to Herrick.
Lectures: 3 hours per week, second term.
- 429A Seventeenth Century Literature: Skepticism and Belief. Half Course. First Term. L.Rahm**
Focusing on the relationship between man and his world order in a period of transition, this course will stress the literature of introspection and psychological insight, drawing from various seventeenth-century genres. Readings will include a considerable portion of Donne's poetry, one or two Jacobean tragedies, Browne's *Religio Medici*, Bunyan's *Grace Abounding* and poetry of Herbert, Marvell and perhaps others from Louis Martz's *The Meditative Poem*. Students planning to take the course should be familiar with *Hamlet* and a selection of Montaigne's *Essays*.
Lectures: 3 hours per week, first term.
- 431B Milton. Half Course. Second Term. L.Rahm**
Study of Milton's development as an artist and thinker from his school years through his involvement in the English Civil War to his final achievement in the epic genre. Readings will include the shorter poems, selected prose, *Paradise Lost*, and *Samson Agonistes*.
Lectures: 3 hours per week, second term.
- 432 Literature of the Eighteenth Century. Full Course. D.Taylor**
A study of the aesthetic principles underlying the eighteenth century view of art. Numerous cross references are made to the painting of the period. Readings will be drawn from Dryden, Pope, Swift, Johnson, Boswell, Reynolds, *The Letters of Gainsborough*.
Lectures: 3 hours per week for two terms.
- 433A The Restoration and Eighteenth Century. Half Course. First Term. R.Philmus**
Dryden, Swift and Pope.
Lectures: 3 hours per week, first term.

ENGLISH

- 435B The Restoration and Eighteenth Century. Half Course. Second Term. R.Philmus**
Johnson, Richardson and Fielding.
Prerequisite: 433A.
Lectures: 3 hours per week, second term.
- 436 Forms of the Fantastic: Romantic Literature. Full Course.**
Through selected poetry of Blake, Coleridge, Byron, Keats and Shelley, and the novels of Matthew Lewis, Scott, Mary Shelley and the Brontes, we will examine the flight from reality into the fantastic in Romantic art.
Lectures: 3 hours per week for two terms.
- 437A The Romantic Period. Half Course. First Term. L.Corwin**
The course will survey the major poets of the Romantic period (Blake, Wordsworth, Coleridge) with historical background and emphasis on the common technical and thematic elements of Romantic poetry. Close readings of selected individual poems will be emphasized. Readings in Romantic critics will be integrated with study of the poetry. Mary Shelley's *Frankenstein* will be studied as an example of the Gothic novel incorporating the social concerns of the period.
Lectures: 3 hours per week, first term.
Texts: Russel Noyes, *English Romantic Poetry and Prose*
Mary Shelley, *Frankenstein*
Recommended Reading: M.H. Abrams, *The Mirror and the Lamp*. R. Gleckner, *Romanticism: Points of View*. Morse Peckham (ed.), *Romanticism*.
- 439B The Romantic Period. Half Course. Second Term. L.Corwin**
Same as above treating Byron, Shelley and Keats.
Lectures: 3 hours per week, second term.
Texts: Same as above excepting *Frankenstein*.
- 441A Victorian Literature. Half Course. First Term. J.P.Zuckermann**
The course will begin with a study of *Vanity Fair*, *Middlemarch* and *The Last Chronicle of Barset*, and proceed to a selection of shorter works. We shall be particularly concerned with literary treatments of the individual consciousness and of society, and with the development and special problems of those literary forms most adapted to the Victorian approach to those themes.
Students enrolled in this course will be divided into three groups: each group will meet once a week for one and a half hours.

- 443B Victorian Literature. Half Course. Second Term. J.P.Zuckermann**
 Recommended for students who want a half course on some central works of Victorian Literature. This course may also be regarded as a continuation of 441A. We shall turn to an investigation of the Victorian exploration of the individual consciousness, and of the relationship between the individual and his society. We shall be principally concerned with the poetry of Tennyson and Browning and some of the fiction of Dickens.
 Students will be divided into three groups: each group will meet once a week for one and a half hours.
- 444 Literature and Aesthetics of the Nineteenth Century. Full Course. D.Taylor**
 A study of the various views of the function of literary and fine art from the end of Romanticism to the beginning of the twentieth century. The poetry of Tennyson and Browning will be studied as largely illustrative of the Victorian view of poetry. The theoretical prose of the period will be represented by writings of DeQuincey, Shelley, Ruskin, Whistler, Wilde, Swinburne, Fry, Bell.
 Lectures: 3 hours per week for two terms.
- 445B Nineteenth Century Fiction. Half Course. Second Term. E.Buitenhuis**
 Texts will include Dickens, *Bleak House*. George Eliot, *The Mill on the Floss*. Samuel Butler, *The Way of All Flesh*. Disraeli, *Coningsby*. Hardy, *Jude The Obscure* and *Minor Classics of Nineteenth Century Fiction*, ed. William E. Buckler, Vols 1 & 2.
 Lectures: 3 hours per week, second term.
- 446 Twentieth Century British Literature. Full Course. K.Waters.**
 Emphasis will be placed upon fiction by Conrad, Lawrence, Joyce and Woolf; poetry by Yeats and Eliot; plays by Shaw and Pinter. Authors from among O'Casey, Forster, Huxley, Waugh, Auden, Osborne, Lessing, Sillitoe and Beckett will also be included.
 Lectures: 3 hours per week for two terms.

- 448 American Literature, Nineteenth and Twentieth Centuries: Full Course. L.P.Nowicki**
 A study of archetypal patterns, literary and philosophical concerns of nineteenth and twentieth century American literature. Reading material will be chosen from among the following: Poe, Thoreau, Hawthorne, Melville, Whitman, Dickinson, James and Twain. The remainder of the course will be devoted exclusively to prose writers: Crane, Norris, Anderson, Fitzgerald, Hemingway, Faulkner, Dos Passos, West, Steinbeck, Wolfe, Mailer, Kerouac, Salinger, and Updike, selections to be made from amongst these writers.
 Lectures: 3 hours per week for two terms.
- 449A The Short Story in America. Half Course. First Term. R.Martin**
 Representative examples of American short stories will be studied, chosen from the nineteenth and twentieth centuries. Although there will be a major emphasis on *explication de texte*, the stories will also be considered in the light of American cultural and historical development. Readings in Hawthorne, Melville, James, Fitzgerald, Hemingway and others.
 Lectures: 3 hours per week, first term.
- 451B American Poetry. Half Course. Second Term. R.Martin**
 A consideration of the development of the art of poetry in America through a study of the major American poets. Various aesthetics from the Puritan-Metaphysical strain to the Beat Movement and Concrete Verse will be examined. Principal emphasis will be placed on poets such as Poe, Dickinson, Whitman, Crane, Eliot, Pound and others.
 Lectures: 3 hours per week, second term.
- 452 Modern Fiction. Full Course. A.T.Broes**
 Beginning with the breakdown of traditional value systems in the nineteenth century, the course will focus on the attempts of modern writers to fashion their own personal systems of value and order. Authors read will include: Dostoevsky, Mann, Forster, Kafka, Faulkner and Camus.
 Lectures: 3 hours per week for two terms.
- 454 Canadian Literature. Full Course. E.Buitenhuis**
 An intensive study of selected readings to be arrived at through consultation with the students.
 Lectures: 3 hours per week for two terms.

500 Final Year Seminar. Full Course.
(Not offered until 1973-74)

The Seminar is intended as an elective. The English Department has yet to devise the exact format for its operation.

ETUDES FRANCAISES

Department Chairman

G. Laurion

Courses leading to an Honours B.A. in French for students starting the three-year program.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
French 310 or 312	French 432	French 532
French (either F. 342 or F. 344)	French 421	French 534
French (either F. 360 or F. 364)	French (either F. 423 or F. 425)	French (one of F. 540, F. 542 and F. 544)
2 Electives	French 428	2 Electives*
	2 Electives*	(Comprehensive examination, See Note 2)
5 courses	5 courses	5 courses

Courses leading to an Honours B.A., in French Language for students starting the three-year program.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
French 310 or 312	French 421	French 432
French (either F. 342 or F. 344)	French 428	French (either two of F. 534X, F. 532X, F. 540X, F. 542X and F. 544X ¹ , or one of F. 540, F. 542 and F. 544)
French (either F. 360 or F. 364)	French 438	French 538
2 Electives	French 451	2 Electives*
	2 Electives*	
5 courses	5 courses	5 courses

1) The capital letter X following a full course number indicates that the student has to take one semester of that course, which will be credited as a half course with a mark out of 50.

Courses leading to a B.A., with a Major in French for students starting the three-year program.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
French 310 or 312	French 421	French (one of F. 540 F. 542 and F. 544)
French (either F. 342 or F. 344)	French (either F. 423 or F. 425)	French 572
French (either F. 360 or F. 364)	French 432	3 Electives*
2 Electives	3 Electives*	
5 courses	5 courses	5 courses

Courses leading to a B.A., with a double Major in French and one of the Modern Languages.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
French 310 or 312	French 421	French (one of F. 540
French (either F. 342 or F. 344)	French (either F. 423 or F. 425)	F. 542 and F. 544)
French (either F. 360 or F. 364)	French 432	French 572
2 courses (Modern Language)	2 courses (Modern Language)	2 courses (Modern Language)
	Elective*	Elective*
5 courses	5 courses	5 courses

* One elective in both University II and III may have to be taken from a specified list of courses approved by Senate.

Note 1. Alterations may be brought to the above programs, from year to year, but the whole three-year program of a given student remains the one appearing in the calendar of the year of his registration in French, unless otherwise authorized by the Chairman of the Department.

Note 2. Students registered in an Honours program are required to take a *final comprehensive examination* at the end of their third year for which they will prepare, under the supervision of the Department Chairman, during their second and third years.

Note 3. Students honouring or majoring in French, or in French and Modern Languages will have a faculty advisor with whom they will consult. Honours students will consult with their advisor in particular to prepare, *in their first or second year*, the reading list required for their comprehensive examination.

Note 4. Courses with an odd number are half courses; courses with an even number are full courses. When followed by an X on the registration form, an even number indicates a half course.

Note 5. A student may take half of a full course (and then receive a mark out of 50) with the previous authorization of the Chairman of the Department of French Studies.

Note 6. "A" indicates first term, "B" second term in case on half courses.

Note 7. Students wishing to pursue a programme in *Double Honours French and one of the Modern Languages* should consult with the chairmen of both departments and have their registration approved by both of them.

The fourth year of the old French Programmes will be found on pages 274 f.

COURSES FOR STUDENTS WHO ARE NEITHER HONOURING NOR MAJORING IN FRENCH.

300 Advanced oral French. Full Course.

A lecture and laboratory course using modern live methods. This course is intended mainly for students who previously had audio-visual training.

Lectures: 3 hours per week for two terms.

302 Intensive advanced oral French. Full Course.

The same type of training as in F. 300 but given more intensively. A serious student should be able to fluently speak French at the end of this course.

Prerequisite: French 220 (CEGEP) or its equivalent.

Lectures: 6 hours per week for two terms.

304H Language and civilization for Arts students. Full Course.

Practical review of the important structures of the French language. Readings of present day topics regarding French and Québec civilizations. Readings in French for the humanities. Translation.

Lectures: 3 hours per week for two terms.

304C Language and civilization for Commerce students. Full Course.

Same as 304H except that the texts for reading and translating are selected from material used in Commerce courses.

Lectures: 3 hours per week for two terms.

304S Language and civilization for Science and Engineering Students. Full Course.

Same as 304H except that the texts for reading and translating are selected from material used in Science and Engineering course.

Lectures: 3 hours per week for two terms.

306H Advanced language and civilization for Arts students. Full Course.

Practical review of the major difficulties of the French language. French and Québec civilizations. Readings in French for the humanities. Advanced translation.

Lectures: 3 hours per week for two terms.

306C Advanced language and civilization for Commerce students. Full Course.

Same as 306H except that the texts for reading and translating are selected from material used in Commerce courses.

Lectures: 3 hours per week for two terms.

306S Advanced language and civilization for Science and Engineering students. Full Course.

Same as 306H except that the texts for reading and translating are selected from material used in Science and Engineering courses.

Lectures: 3 hours per week for two terms.

MAJOR AND HONOURS COURSES

(Les étudiants qui ne sont pas inscrits en *Major* ou en *Honours French* peuvent s'inscrire à ces cours avec la permission du Directeur du Département).

310 Composition, grammaire, avancée et méthodologie.

Introduction aux études littéraires. Ce cours est destiné aux étudiants: qui sont inscrits en *Major* ou en *Honours French* et qui ont suivi moins de trois cours (1) de français au niveau du CEGEP. *Ce cours est éliminatoire.*

6 heures par semaine; deux semestres.

312 Introduction aux études littéraires supérieures.

Dissertation, méthodologie, grammaire, avancée, histoire de la critique. Ce cours est destiné aux étudiants qui sont inscrits en *Major* ou en *Honours French*.

Prérequis: 3 cours (1) de niveau CEGEP ou la permission du Directeur du Département. *Ce cours est éliminatoire.*

3 heures par semaine; deux semestres.

1) F. 130, F. 230G, F. 230L (Loyola Collegial Calendar 1970-71) ou leurs équivalents.

342 Littérature du XIXe siècle (1800-1850). J.-P. Boucher, A. Lauzière

La génération romantique: l'inquiétude, le rêve, l'énergie. Le roman: Chateaubriand, *René*; Constant, *Adolphe*; Vigny, *Cinq-Mars*; Stendahl, *Le Rouge et le Noir*; Balzac, *Le Père Goriot*. Le théâtre: Hugo, *Ruy Blas*; Vigny, *Chatterton*; Musset, *Lorenzaccio*. La poésie: Lamartine, *Les Méditations*; Hugo, *Les Contemplations*; Vigny, *Les Destinées*; Musset, Nerval et Gautier.

3 heures par semaine; deux semestres.

344 Littérature du XIXe siècle (1850-1890). J.-P. Boucher, A. Lauzière

Le monde bourgeois et anti-bourgeois: courants réaliste, naturaliste, symboliste et fin de siècle. La Prose: Flaubert, *Madame Bovary*; Zola, *L'Assommoir*; Barbey d'Aurevilly, *Les Diaboliques*; Huysmans, *A Rebours*; Bloy, *Le Désespéré*. La poésie: Baudelaire, *Les Fleurs du Mal*; Verlaine, *Romances sans paroles*; Rimbaud, *Une Saison en Enfer*; Mallarmé, *L'Après-midi d'un faune*. Le théâtre: Dumas fils, Augier, et Courteline; Becque, *Les Corbeaux*; Maeterlinck, *Pelléas et Mélisande*; Jarry, *Ubu-Roi*.

3 heures par semaine; deux semestres.

360 Littérature québécoise. Le Roman. A. Lauzière

Origines, influences, évolution, Etudes d'oeuvres modernes. Textes: Ringue, *Trente Arpents*; Guévremont, *Le Survenant*; Roy, *Bonheur d'occasion*; Lemelin, *Au pied de la pente douce*; Langevin, *Poussière sur la ville*; Thériault, *Agaguk*; Bessette, *Le Libraire*; Blais, *Une saison dans la vie d'Emmanuel*; Ferron, *L'Amélanchier*; Ducharme, *L'Avalée des avalés*.

3 heures par semaine; deux semestres.

364 Littérature québécoise. La poésie. A. Lauzière

Origines et influences: évolution thématique et esthétique. Textes: Fréchette, Morin, Lasnier, Choquette, (Coll. Classiques Canadiens); Nelligan, *Poésies Complètes*; Desrochers, *A l'Ombre de l'Orford*; Saint-Denys Garneau, *Poésies complètes*; Grandbois, *Poésies*; Hébert, *Poèmes*; Lapointe G., *Ode au Saint-Laurent*; Chamberland, P., *Terre Québec*; Miron, *L'Homme rapaillé*; Sylvestre, G., *Anthologie de la poésie canadienne-française*; Tougas, G., *Histoire de la littérature canadienne-française*. Leçons, séances de travaux pratiques et travaux de recherche.

3 heures par semaine; deux semestres.

368 Littérature québécoise. Le théâtre, le conte et l'essai. (Not offered 1971-72)

3 heures par semaine; deux semestres.

421A Littérature du XVIIe siècle; Le Théâtre et la dramaturgie classique: Corneille, Racine, Molière. P. Toupin

Textes: *Polyeucte*; *Britannicus*; *L'Ecole des femmes*; Lagarde & Michard, *XVIIe siècle*.

3 heures par semaine; premier semestre.

- 423B Littérature du XVIIe siècle; Les moralistes, les penseurs et les orateurs. P. Toupin**
Textes: Descartes, *Le Discours de la Méthode*; Pascal, *Pensées*; La Rochefoucauld, *Maximes*; Bossuet, *Oraisons funèbres et Sermons*; La Bruyère, *Les Caractères*; Lagarde et Michard, *XVIIe siècle*.
3 heures par semaine; deuxième semestre.
- 425 Littérature du XVIIe siècle;**
La fable, le roman, la littérature épistolaire, les mémoires.
(Not offered 1971-72)
Textes: La Fontaine, *Fables*; Mme de Lafayette, *La Princesse de Clèves*; Mme. de Sévigné, *Lettres*; Retz, *Mémoires*, Lagarde et Michard, *XVIIe siècle*.
- 428 Histoire de la langue et linguistique. M. Reigel**
Introduction aux sciences de la linguistique. Histoire de la langue française. Cours obligatoire pour les étudiants "Honours" et fortement recommandé aux "Majors".
Leçons et séances de travaux pratiques.
Textes: A. Martinet, *Eléments de linguistique générale*; G. Mounin, *La Linguistique*; B. Malmberg, *La Phonétique*; P. Guiraud, *La Sémantique*, L'Ancient français; A. Dauzat, *Tableau de la langue française*.
3 heures par semaine; deux semestres.
- 432 Littérature de XVIIIe siècle. Le roman et le théâtre. P. Toupin**
Textes: Lesage, *Gil Blas*; Prévost, *Manon Lescaut*; Marivaux, *Le Payson Parvenu*, *Le Jeu de l'Amour et du Hasard*; Montesquieu, *Lettres Persanes*; Voltaire, *Zadig*; *Candide*; Diderot, *Le Neveu de Rameau*; Rousseau, *La Nouvelle Héloïse*; Bernardin de Saint-Pierre, *Paul et Virginie*; Beaumarchais, *Le Mariage de Figaro*; Lagarde et Michard, *XVIIIe Siècle*.
- 438 Méthodologie du français langue seconde.**
(Not offered 1971-72)
Initiation aux principes et méthodes de la linguistique appliquée et de la phonétique corrective. Etude et évaluation de plusieurs méthodes d'enseignement du français langue seconde pour enfants, adolescents et adultes. Etude et préparation de tests et examens. Travaux pratiques.
3 heures par semaine; deux semestres.

- 451 Traduction avancée.**
(Not offered 1971-72)
L'art de la traduction. Stylistique comparée du français et de l'anglais. Traduction de textes littéraires de l'anglais au français.
- 500 Examen oral de fin d'études (ancien programme) G. Laurion**
Pendant leur quatrième année, les étudiants "Honours" devront subir un examen oral devant jury portant sur 30 volumes choisis sur une liste de 75 à 100 titres et répartis sur tous les siècles. La réussite à cet examen donnera aux étudiants un "crédit" qui sera leur onzième au Département d'Etudes Françaises.
- 532 Littérature du moyen âge. G. Laurion**
Initiation à la langue et à la littérature du moyen âge. Choix d'oeuvres épiques, romanesques et lyriques.
Textes: *La Chanson de Roland*; *Tristan et Iseut*; Chrétien de Troyes, *Yvain*; *La Chastelaine de Vergi*; Guillaume de Lorris, *Le Roman de la rose*; Villehardouin, *La Conquête de Constantinople*; Villon, *Poésies*; Lagarde et Michard, *Le moyen âge*.
Leçons et séances de travaux pratiques.
3 heures par semaine; deux semestres.
- 534 Littérature de XVIe siècle. La Renaissance et l'humanisme en France. M. Riegel**
Prose et Poésie. Origines, évolution et oeuvres maîtresses.
Textes: Rabelais, *Gargantua*; Du Bellay, *Défense et Illustration de la langue française*, *Regrets*; Ronsard, *Les Amours*; Montaigne, *Les Essais*; d'Aubigné, *Les Tragiques*; Lagarde et Michard *XVIe siècle*.
3 heures par semaine; deux semestres.
- 538 Pédagogie de l'audio-visuel.**
(Not offered 1971-72).
Les étudiants se familiariseront avec les appareils audio-visuels employés dans l'enseignement et étudieront l'usage de ceux-ci l'enseignement du français langue seconde.
Ils étudieront, en particulier, l'usage du magnétophone et du laboratoire de langue et apprendront la technique de la préparation des leçons et exercices adaptés aux divers média de communication (bandes sonores, films, télévision). Travaux pratiques.

540 Littérature du XXe siècle. La poésie.
(Not offered 1971-72)

Evolution. Nouvelles tendances.

Textes: Claudel, *Cinq grandes odes*; Valéry, *Poésies*, Apollinaire, *Alcools*; Breton, *Clair de terre*; Eluard, *Capitale de la douleur*; Char, *Le poème pulvérisé*; Michaux, *Plume*; Ponge, *Le parti-pris des choses*; Breton, *Les Manifestes du surréalisme*.

542 Littérature du XXe siècle. Le roman.

M. Andersen

Evolution. Structure et technique. Thèmes.

Textes: Alain-Fournier, *Le Grand Meaulnes*; Gide, *La Porte Etroite*; Proust, *Du Côté de chez Swann*; Mauriac, *Thérèse Desqueyroux*; Bernanos, *Journal d'un curé de campagne*; Malraux, *La Condition humaine*; Camus, *L'Etranger*; Sartre, *La Nausée*. Le nouveau roman. Lagarde et Michard, *XXe siècle*.

3 heures par semaine; deux semestres.

544 Littérature du XXe siècle. Le théâtre.

M. Andersen

Etude de l'évolution du théâtre, des structures dramatiques, du langage théâtral. Etude aussi de la condition humaine, de son illustration et de sa défense, dans le théâtre du XXe siècle.

Textes: Jarry, *Ubu*; Claudel, *l'Annonce faite à Marie*; Giraudoux, *La Guerre de Troie n'aura pas lieu*; Anouilh, *Becket ou l'honneur de Dieu, la Sauvage*; Montherlant, *La Reine Morte*; Sartre, *Huis Clos, les Mouches*; Camus, *Caligula, le Malentendu*; Schéhadé, *Monsieur Bob'le*; Beckett, *En attendant Godot, Fin de Partie*; Ionesco, *La Cantatrice chauve, Rhinocéros*; Genet, *Haute Surveillance; Le Balcon*; Quelques pièces québécoises contemporaines.

3 heures par semaine; deux semestres.

550 Théâtre et diction.

P. Toupin

L'inscription ne vaut qu'avec l'approbation du professeur; de plus, elle est limitée. La présence aux cours est obligatoire. Les étudiants présenteront une pièce au premier semestre et une autre au second semestre. Ils choisiront, avec le professeur, les pièces à présenter.

572 Civilisations française et québécoise.

J.-C. Badin

Le monde français; ses principales caractéristiques; unité et diversité. Le monde québécois; ses origines, son évolution. Aspects de la vie économique politique et sociale en France et au Québec. Aspects de la vie intellectuelle et artistique en France et au Québec. Les relations franco-québécoises.

Textes: Camille Bauer, *Panorama de la France moderne*; Guy Michaud, *Guide France*.

3 heures par semaine; deux semestres.

NON-CREDIT COURSE.

Corrective Phonetics

M. Andersen

A course offered to all faculty and students who have some knowledge of French. It aims at correcting their pronunciation of French and at increasing their fluency in speaking that language. The course takes place in the Language Laboratory.

1 hour per week for two terms.

GEOLOGY

Department Chairman

E.H. Chown

***Courses leading to an Honours B. Sc. in Geology.**

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Geology 311	Geology 401	Geology 502
Geology 313	Geology 412	Geology 512
Geology 315	Geology 413	Geology 521
Geology 321	Geology 431	Geology 523
Geology 331	Geology 441	Geology 552
Geology 333	Geology 442	Geology (Two courses from 501, 531, 541)
Chemistry 342	Chemistry 336	
Physics 300	Elective**	
Elective	Science Elective 1	Elective **
Science Elective 1		

***Courses leading to a B. Sc. with a Major in Geology.**

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Geology 311	Geology 401	Geology 512
Geology 313	Geology 412	Geology 521
Geology 315	Geology 442	
Geology 321	Geology Elective (1/2)	Geology Elective (1-1/2)
Geology 331	Chemistry 336	Elective **
Geology 333	Elective **	Science Elective
Chemistry 342	Science Elective	
Elective		
Science Elective		

***Courses leading to a B. Sc. in Geology.**

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Geology 313	Geology 412	Geology 521
Geology 311	Geology 442	Geology Elective (1-1/2)
Geology 321	Elective**	Elective**
Elective	Science Elective (2)	Elective (2)
Science Elective (2)		Science Elective

1. The Department recommends that Honours students take an additional Science Elective either in University I or II or two half courses, one per year.
2. Elective may be any course not given by the Geology Department.
3. All elective courses must be approved by the Department.

* Students planning to continue in Geology are normally advised to take Geology 201, or equivalent, in Collegial II. Students lacking this course will be required to take it with their University programme and will not receive credit for it at the University level.

** These electives may have to be taken from a specified list of courses approved by Senate.

The fourth year of the old Geology Programme will be found on pages 274 f.

Field Trips and Field Schools.

Lectures and laboratory cannot successfully substitute for actual observation of geology in the field. Therefore, for all students, half or full day field trips to areas of geological interest are a normal adjunct to several courses. For students in the Honours and Major programmes, geological and geophysical field schools are conducted by staff members in the two weeks following the completion of examinations in the spring. Students following the General Programme are not required to take these field schools, but if suitably qualified, may be granted permission to do so by the department.

Summer Employment.

It is strongly recommended that prior to graduation at least one summer be spent in some phase of geological work. Although the Department of Geology cannot guarantee summer employment, its students can normally expect to be engaged in suitable work, during the summer months, with government agencies or private companies.

201**General Geology. Half Course. Equivalent (Geology 101)**

Basic concepts, major features of the earth, igneous and earthquake activity, erosion and sedimentation, stream activity and the development of various land forms, faulting and folding, mountain building, continental drift, glaciation, the earth's origin.

Laboratory studies include investigation of rock and mineral specimens interpretation of topographic and geological maps and aerial photographs, a field excursion to local areas.

Lectures: 3 hours per week, first or second term.

Lab: 2 hours per week, first or second term.

Text: Rogers and Adams, *Fundamentals of Geology*, Harper.

Lab. Manual: Howard and Hamblin, *Physical Geology Lab Manual*, Burges.

303 Introduction to Geologic Mapping. Half Course.

(Not offered 1971-72)

Students are introduced to the use of transits, levels, compass and aerial photographs. Some elementary concepts of map making and descriptive geometry are studied, and simple outcrop maps are constructed from notes obtained in the field.

Two-week field school in May.

311 Descriptive and Determinate Mineralogy. Half Course.**J.T. Jenkins**

The lecture portion of the course is concerned with the classification and description of minerals in terms of their physical and chemical properties, compositions, geological environments, geographical occurrences and uses. In the laboratory simple, physical and chemical tests are outlined, and then applied in identifying some 150 minerals.

Lectures: 1 hour per week for two terms.

Lab: 2 hours per week for two terms.

Text: Keaus, Hunt and Ramsdell, *Mineralogy*, McGraw-Hill.

313 Morphological Crystallography. Half Course.**J.T. Jenkins.**

This course is an introduction to crystallography in which a systematic but brief description of the morphology of the forms of some of the mineralogically important crystal classes is given.

Lectures: 2 hours per week, first term.

Lab: 3 hours per week, first term.

Text: Kraus, Hunt and Ramsdell, *Mineralogy*, McGraw-Hill.

315 Optical Crystallography. Half Course.**J.T. Jenkins**

Lectures deal with the theoretical background necessary for the use of the petrographic microscope. In the laboratory, oil immersion techniques for the determination of isotropic and anisotropic minerals in powder form are studied. If time permits, an introduction to the use of the four-axis Universal Stage is given.

Prerequisite: Geology 313.

Lectures: 2 hours per week, second term.

Lab: 3 hours per week, second term.

Text: Wahlstrom, *Optical Crystallography*, 3rd ed., Wiley. *U.S.G.S. Bull 848, The Microscopic Determination of the Nonopaque Minerals*, 2nd ed.

321 Invertebrate Paleontology. Half Course.**K.K. Mukherji**

A systematic survey of major invertebrate fossil groups with chief emphasis on morphology, classification, and geologic occurrence. Study of principles of evolutionary concepts and biostratigraphic zonation.

Prerequisite: Geology 201.

Lectures: 2 hours per week, first term.

Lab: 3 hours per week, first term.

Text: Moore, Lalicker and Fisher, *Invertebrate Fossils*, McGraw-Hill.

331 Applied Geophysics. Half Course.**K.K. Mukherji**

An introduction to geophysical methods of prospecting and of investigating sub-surface structures. The theories, uses and limitations of various magnetic, electrical, gravitational and seismic methods are explained and compared. The practical operation of the instruments is reviewed and actual field results are analysed.

Prerequisite: Geology 201.

Lectures: 2 hours per week, second term.

Lab: 3 hours per week, second term.

Text: Debrin, *Introduction to Geophysical Prospecting*, McGraw-Hill.

333 Field Geophysics. Half Course.**K.K. Mukherji**

Field work involving small scale seismic, magnetic, gravimetric and electrical surveys.

Prerequisite: Geology 331.

Field Work: 2 weeks in May at the Loyola Geophysics Field School.

401 Field Geology. Half Course.**J.T. Jenkins and K.K. Murkherji**

(Not offered 1971-72)

Surface and underground field mapping methods. Preparation of geological maps, sections and reports from field notes, diagrams, air photos, etc.

Prerequisite: Geology 442, 412.

Field Work: 2 weeks in May at the Loyola Geology Field School.

412 Elementary Petrology. Full Course. E.H. Chown and J.T. Jenkins
(Not offered 1971-72)

The identification and description of hand specimens of sedimentary, igneous and metamorphic rocks. Methods of classifying rocks.

Prerequisite: Geology 201 and 311.

Lectures: 2 hours per week for two terms.

Lab: 2 hours per week for two terms.

References: Pettijohn, *Sedimentary Rocks*, 2nd ed. Harper. Huang, *Petrology*, McGraw-Hill. Williams, Turner, Gilbert, *Petrography*, Freeman. Winkler, *Petrogenesis of Metamorphic Rocks*, 2nd ed. Springer-Verlag.

413 Sedimentary Petrology. Half Course. E.H. Chown
(May be offered in 1971-72)

The occurrence and formation of sedimentary rocks. Laboratory includes a brief survey of techniques applied to unconsolidated sediments, but particular emphasis is placed on the microscopic examination of sedimentary rocks.

Prerequisite: Geology 315, 412.

Lectures: 2 hours per week, second term.

Lab: 3 hours per week, second term.

Text: Pettijohn, *Sedimentary Rocks*, 2nd ed. Harper.

431 Geochemistry. Half Course. D.J. McDougall
(May be offered 1971-72)

An introduction to geochemistry including the chemical make-up of the solar system and the geochemistry of the atmosphere, hydrosphere crust, mantle and core. The formation and chemistry of igneous, sedimentary and metamorphic rocks, with some emphasis on the trace elements which characterize each. Anomalous trace elements concentrations in rocks, soils and water and the application to mineral exploration geochemistry. In the laboratory the material discussed in the lectures is illustrated by geochemical calculations, trace element distribution maps and methods of geochemical analysis.

Prerequisite: Geology 201.

Lectures: 2 hours per week, second term.

Lab: 3 hours per week, second term.

Texts: Mason, *Principles of Geochemistry*, 3rd ed., Wiley, and selected references.

441 Geomorphology. Half Course. J.P. Mills
(Not offered 1971-72)

Erosion; soil development; Fluvial processes and mass wasting; influence of climate, rock type and structure on the development of land forms; coastal features; aeolian processes; glacial and periglacial activity. Laboratory work emphasized interpretation of aerial photographs and topographic maps and a field excursion to local areas.

Prerequisite: Geology 201.

Lectures: 2 hours per week, first term.

Lab: 3 hours per week, first term.

Texts: Sparks, *Geomorphology*, Longmans. Ray, *U.S.G.S. Professional Paper 373*.

442 Structural Geology. Full Course. E.H. Chown
(Not offered 1971-72)

The recognition and origin of geological structures, the relationship of structures to geologic processes, an introduction to tectonic processes. Laboratory includes a survey of methods of structural interpretation, structural experiments, field trips.

Prerequisite: Geology 201.

Lectures: 2 hours per week for two terms.

Lab: 3 hours per week for two terms.

Texts: Hills, *Elements of Structural Geology*, Methuen; or Spencer, *Introduction to the Structure of the Earth*, Mc Graw-Hill. Lab Text: Simpson, *Geological Maps*, Pergamon.

501 Reading Course. Half Course. Staff

A reading and discussion course for Honours and interested Major students. The course involves reading in two disciplines of geology chosen by the student, and discussion with assigned faculty members.

Five hours per week, first or second term.

502 Undergraduate Thesis. Full Course. Staff

Honours students in their final year are expected to show competence in isolating and examining a geological problem using techniques available within the department, working in conjunction with assigned faculty advisers. Course evaluation will be based on the student's performance in the investigation and on the written report. Major students may also take the course at the discretion of the Department.

Five hours per week for two terms.

512 Igneous and Metamorphic Petrology. Full Course. J.T. Jenkins

Presentation and interpretation of phase relations mineralogy, fabrics, classifications and petrogenesis of the igneous rocks. The scope of metamorphism, the zone, grade and facies concepts of metamorphism. ACF and A'KF diagrams. In the laboratory, megascopic and microscopic techniques are used in the examination of rocks representative of the more common igneous and metamorphic varieties.

Prerequisite: Geology 311, 313, 315, 412.

Lectures: 2 hours per week for two terms.

Lab: 3 hours per week for two terms.

Texts: Huang, *Petrology*, McGraw-Hill. Moorhouse, *The Study of Rocks in Thin Section*, Harper.

References: Deer, Howie and Zussman, *An Introduction to the Rock Forming Minerals*, Longmans. Spry, *Metamorphic Textures*, Pergamon. Winkler, *Petrogenesis of Metamorphic Rocks*, 2nd ed., Springer-Verlag.

521 Historical Geology. Half Course. K.K. Mukherji

Elementary principles of stratigraphy, correlation and time concept. A brief survey of major events in the Geologic history of the earth and its inhabitants with special reference to North America. Emphasis will be given to the study of some type sections, paleogeography and organic aspects.

Prerequisite: Geology 201.

Lectures: 2 hours per week, first term.

Lab: 3 hours per week, first term.

Text: Kummel, *History of the Earth*, 2nd ed. Freeman

523 Geology of Canada. Half Course. K.K. Mukherji

Geologic study of the major geomorphic subdivisions of Canada with special emphasis on stratigraphy, correlation, paleogeography, sedimentation and tectonics. Reading assignments and colloquium are used to probe into specific problems.

Prerequisite: Geology 201, (521 or 321)

Lectures: 2 hours per week, second term.

Colloquium: 1-3 hours per week, second term.

Text: *Geology and Economic Minerals of Canada*. 5th ed., Econ. Geol. Series No. 1 of the Geological Survey of Canada.

531 Mineral Physics. Half Course. D.J. McDougall

Selected aspects of the relationship of solid state characteristics of minerals to their conditions of formation and subsequent history. In the laboratory, details of crystal structure are considered and readily developed changes in solid-state conditions in minerals and metals are used to amplify the lecture material.

Prerequisites: Geology 311, 313, 431.

Lectures: 2 hours per week, first term.

Lab: 3 hours per week, first term.

Texts: Deer, Howie and Zussman, *An Introduction to the Rock Forming Minerals*, Longmans. Spry, *Metamorphic Textures*, Pergamon.

References: Van Vlack, *Elements of Materials Science*, 2nd ed. Addison-Wesley; and/or Wulf et al, *The Structure and Properties of Materials*, Wiley.

**541 Engineering Geology. Half Course.
(May be offered 1971-72)**

Engineering properties of rocks. Ground water. The formation and mechanics of soils including structure, gradation, sedimentation, permeability, compressibility and shearing strength. Application of soil characteristics to typical geotechnical problems in bearing capacity, settlement and lateral earth pressure. Crustal movements and stability of slopes. Frost action in regolith. Laboratory work for experimental determination of above characteristics.

Prerequisite: Geology 201.

Lectures: 2 hours per week, second term.

Lab: 3 hours per week, second term.

551 Economic Geology. Half Course. E.H. Chown

The origin, classification and evaluation of ore and petroleum deposits. Laboratory includes problems in ore evaluation and petroleum geology, and the examination of suites from representative mining camps.

Prerequisite: Geology 201, 311.

Lectures: 2 hours per week, first term.

Lab: 3 hours per week, first term.

Text: Skinner, *Earth Resources*, Prentice Hall.

552 Ore Deposits. Full Course.**E.H. Chown**

The origins, type of occurrence and classification of metallic and non-metallic mineral deposits. The application of all fields of geology towards a specific problem. Laboratory includes exercises on property and ore evaluation, an introduction to incident light microscopy and a series of examinations and a term project on suites from various ore deposits.

Prerequisite: Geology 315, 442, 412.

Lectures: 2 hours per week for two terms.

Lab: 3 hours per week for two terms.

Text: Park and MacDiarmid, *Ore Deposits*, 2nd ed. Freeman.

HISTORY**Department Chairman****F.G.W. Adams****Courses leading to a B.A. with a Major in History.**

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
History*	History +	History +
History*	History +	History**
Elective	Elective	Elective
Elective	Elective	Elective
Elective	Elective***	Elective***

* Elective from Survey or Topical Courses.

+ Elective from Survey or Topical Courses. Elective from Honours Courses with permission of Instructor only.

** Elective from Honours Courses.

One Honours course will be required of all Major students.

*** These electives may have to be taken from a specified list of courses approved by Senate.

Courses leading to an Honours B.A. in History.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
History*	History +	Honours History Tutorial
History*	History (Hons.)**	History (Hons.)**
History*	History (Hons.)**	History +
Elective	Elective	Elective
Elective	Elective***	Elective***

* Elective from Survey or Topical Courses.

+ Elective from Survey, Topical or Honours Courses.

** Elective from Honours Courses.

*** These electives may have to be taken from a specified list of courses approved by Senate.

Of the honours history courses in the second and third year, one must be in a field other than his tutorial.

Students in the honours history programme will be assigned a faculty advisor, who will normally be the director of their honours history tutorial, and with whom they must consult concerning their selection of courses.

There is a comprehensive oral examination for all honours history students toward the end of their final year.

The fourth year of the old History Programmes will be found on pages 274f.

CEGEP GRADUATES wishing to register for a University Program as of January 1972 may take one of the following courses for credit:

- 257 **Afro-American History** (see page 165).
- 264 **History of German Central Europe** (see page 166).
- 314 **East Asia Today** (see 169).

SURVEY COURSES.

- 201 **History of Canada. Full Course.** R. Morgan
Survey of Canadian History. The course is arranged topically and the student is expected to read intensively in certain areas. The term work requirements are: one term paper and one book review. The course will centre on a regional approach to Canadian history, including the historiography of French Canadian history, the ideological development of English Canada in the nineteenth century, analysis of economic growth in Canada, the impact of the First World War and the period of post-war unrest and will conclude with an examination of problems in post 1945 Canadian society.
Lectures and Seminars: 3 hours per week for two terms.
- 202 **History of the United States. Full Course.** W. Akin
Survey of American history from settlement to the mid-twentieth century. The focus of the course is political, but considerable attention is devoted to social and intellectual movements. Students might read in advance Richard Hofstadter, *et al.*, *The Structure of American History*.
Lectures and Seminars: 3 hours per week for two terms.
- 203 **History of Modern Europe, 1789-1919. Full Course.** W. Hubbard
(Not offered 1971-72)
Social, economic and political development of Europe from the ancien régime to the crisis of 1914-18. Emphasis is on changing patterns of social structure and evolution of political ideologies in response to the growth of modern industrial society.
Lectures and Seminars: 3 hours per week for two terms.

- 204 **The World Since 1914. Full Course.** G. Adams
A discussion of the main trends of world history — political, diplomatic, socio-economic and cultural — since World War I. Special attention will be given to European developments.
Lectures and Seminars: 3 hours per week for two terms.
- 205 **History of Medieval Europe. Full Course.** R. Coolidge
(Not offered 1971-72)
A study of Western Europe (France, Germany and Italy with occasional reference to neighbouring areas) during the period 300 to 1300 A.D. The purpose of the course will be to discover the positive meaning of the term "medieval" by an examination of the political and cultural interaction of the Greco-Roman, Judeo-Christian and Germanic traditions, as revealed in primary sources. Readings will be assigned from a number of recent collections of translated contemporary source material which will form the basis of class discussions.
- 206 **Renaissance and Reformation. Full Course.** R. Tittler
(Not offered 1971-72)
A discussion of the problems of transition from Medieval to Early Modern European society seen in political, ideological and religious socio-economic, and cultural terms.
- 207 **History of England, 1485 to the present. Full Course.** R. Tittler
Emphasis on the development of English society and political structure, with some attention to religious, cultural, and economic development as well.
Lectures: 3 hours per week for two terms.
- 208 **History of Russia. Full Course.**
A survey of Russian history from Peter the Great to the present.
Lectures: 3 hours per week for two terms.
Text: Nicholas V. Riasanovsky, *A History of Russia*.
- 209 **Introduction to the History of Africa. Full Course.**
Africa before the Europeans, Islamic and European conquests, slavery, resistance movements and the rise of nationalism.
Lectures and Seminars: 3 hours per week for two terms.

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- 210 The Ancien Régime, 1660-1789. Full Course.** C. O'Keefe, S.J.
An historical survey of this period, and a study of selected themes and problems: the cultural and political supremacy of France; the strength and weakness of absolute government as seen in the reign of Louis XIV; the resurgence of the nobility; unrest and social and economic reform; contemporary appraisals of the ancien régime.
Lecture and Seminars: 3 hours per week for two terms.
- 216 The Ancient World. Full Course.** Mrs. B. Wardy
Listed as Classics 450 and may be taken either as a History or Classics course.
Lecture: 3 hours per week for two terms.
- 217 Modern History of China, Japan and India.** R. Porter
(Not offered 1971-72)
Students should apply for permission to take History 117AB.
- 227 History of the Middle East. Full Course.** H. Habib
Listed as Political Science 455A-457B and may be taken either as a History or Political Science course.
Lecture: 3 hours per week for two terms.

TOPICAL COURSES

These courses are to provide study of broad historical areas for students who have taken the survey course in an area of history, and who either do not desire a seminar or do not have sufficient background. It also includes courses for which a survey is not a requirement.

- 251 Protest Movements in Canada since Confederation. Full Course.** M. Vipond
An examination of the social and intellectual origins of political protest in Canada since 1867. Topics will include agrarian revolt, labour organization and sectional discontent, with emphasis on such third parties as Canada First, Progressive Party, C.C.F., Social Credit and Union Nationale.
Lecture and discussion: 3 hours per week for two terms.
- 252 Canadian-American Relations. Full Course.** R. Morgan
(Not offered 1971-72)
Examination of the political, economic and social influences of the United States on Canada from the seventeenth to the twentieth centuries.

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- 253 History of Québec. Full Course.** J. Monet, S.J.
Social, economic and political history of Québec from the origins to the present, with emphasis on the period since 1760.
Lectures and discussion: 3 hours per week for two terms.
- 257 Afro-American History. Half Course. Second Term.** W. Akin
An analysis of the historical and contemporary experience of Afro-Americans. It will include the African heritage, slavery, abolition, agrarian peonage, the rise of the ghetto, intellectual and social movements and biography.
Lecture and discussion: 3 hours per week, second term.
- 258 The United States in the Twentieth Century. Half Course.** W. Akin
(Not offered 1971-72)
An examination of the political reforms in the twentieth century (Progressivism, the New Deal, the Fair Deal, and the domestic programs of Kennedy and Johnson), and socio-economic trends (black awareness, automation and cybernation, mass organization).
- 259 History of Women. Full Course.** M. Porter
The historical experience of women in North American society from a thematic rather than chronological perspective. The following issues will be discussed: historical contributions of women in North America; methods and problems of historical analysis of women's past; the nature of and causes for her different historical experience; the economic, political and ideological patterns of society as they relate to women's past; the institution of the family, the feminist movement.
Lecture and discussion: 3 hours per week for two terms.
- 260 Introduction to Archaeology. Full Course.** J.E. Lempkowski
Listed as Classics 460 and may be taken as either a history or classics course.
Lectures: 3 hours per week for two terms.
- 261 Power and Protest in the Middle Ages. Full Course.** R. Coolidge
A thematic approach to the history of Western Europe between the eleventh and fifteenth centuries. An investigation of the 'established order' — in government, religion, art and literature, commerce, — of the ways in which this order was challenged, and of the changes effected by the dialogue between order and dissent.
Lecture and discussion: 3 hours per week for two terms.

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- 263 Problems in Church and State in Modern Europe. Full Course. C. O'Keefe, S.J.**
(Not offered 1971-72)

An examination of some of the important themes in Church and State relations in Europe with emphasis on early modern Europe. Some of the themes to be discussed are: the changing theory in church and state relations; the growth of secularization; the development of the notion of religious tolerance; established churches and nonconformist churches; the church and social unrest.

- 264 History of German Central Europe. Full Course. W. Hubbard**

The historical evolution of German Central Europe, its changing social, economic and political order, from the emergence of Hapsburg-Hohenzollern dualism, 1740, to the collapse of the Nazi Empire, 1945. Selected aspects of German culture will also be considered.

Lecture and discussion: 3 hours per week for two terms.

- 265 Society and Economy in History. Change and Stability. Full Course. W. Hubbard**

An introduction to socio-economic history, its problems, techniques and contributions to an understanding of historical change. The focus will be on Europe from the seventeenth century to the present, although non-European examples will be considered. The course will investigate such topics as the growth of capitalism, the displacement of a corporate, status society by a society based on economic classes, the growth of industry and cities and their impact on traditional agrarian society of the ancient regime. Special attention will be given to the role of cities in stimulating social and economic change.

Lecture and discussion: 3 hours per week for two terms.

- 266 History of Modern France. Full Course. G. Adams**

La France from the Revolution to DeGaulle. Emphasis will be given to French thought and literature.

Lecture and discussion: 3 hours per week for two terms.

- 270 A History of British Diplomacy from the Congress of Vienna to the Common Market. Full Course. R. Porter**

The course will attempt to ascertain and evaluate the guiding principles of Britain's foreign policy as they are illustrated by practice in the nineteenth and twentieth centuries. The study will embrace the struggle to maintain the balance of power within Europe, the acquisition of Empire, British involvement in the Great War, the period between the wars, with special reference to the League of Nations, and British policy since World War II, with European Economic Community. Certain aspects of contemporary international relations theory may also be discussed. There will be frequent seminars.

Lectures: 3 hours per week for two terms.

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- 271 African Government and Politics. Full Course. F. Kunz**

Listed as Political Science 450 and may be taken as either a History or Political Science Course.

Lectures: 3 hours per week for two terms.

- 280 Philosophy of History. Full Course. R. Hinners**

Listed as Philosophy 396 and may be taken as either a History or Philosophy Course.

Discussion: 3 hours per week for two terms.

- 281 The Native Peoples of Canada. Full Course. Staff**
(Also listed under Interdisciplinary Studies)

Examines the crisis of the native peoples of Canada from a multi-discipline perspective: participants shall include not only the Loyola community but Indian and White experts from throughout Canada. The course attempts to set forth the magnitude of this crisis and ends by asking how the Native Peoples will be able to control their own lives and future.

HONOURS COURSES

The following courses are open to honours students in all departments. History majors and students majoring in other departments may take these courses with the permission of the Instructor, and providing they have completed a survey course in the same field.

- 301 Problems in Canadian Intellectual History. Full Course. M. Vipond**

A study of social and political thought, with emphasis on nationalism in both English and French Canada.

Seminar: 2 hours per week for two terms.

- 304 Nationalism in Africa. Full Course.**

A study of African resistance to European rule, with emphasis on culture and politics.

Seminar: 2 hours per week for two terms.

- 305 Nationalism in 19th Century Europe. Full Course.** W. Hubbard
(Not offered 1971-72)

The seminar will investigate the emergence of nationalism as a theoretical and practical political ideology from the end of the eighteenth century to the triumph of the nation-state concept at the Paris Peace Conference in 1919. Special attention will be given to the unification movements in Germany and Italy, especially the impact that national unity has on the formation of the political, socio-economic and cultural order of these countries (including the rise of fascism). Other topics to be considered: the role of nationalism in international affairs, its contribution to the process of modernization, and attempts to found viable pan-national movements.

Offered every other year, alternately with History 317.

- 307 The French Revolution and Napoleon. Full Course.** G. Adams

A study of the course of French history from the 'pre-Revolution' of 1787-1789 to the collapse of Napoleon. Some time will be devoted to an examination of the revolutionary and Napoleonic tradition since 1815.

Seminar: 2 hours per week for two terms.

- 308 Man in Contemporary Society. Full Course.** Staff

A reading and discussion course on the key intellectual, social and political trends of the twentieth century. Emphasis is placed on an interdisciplinary approach to such topics as political elites, nationalism, etc. Further information may be obtained from the Department Chairman.

Seminar: 2 hours per week for two terms.

- 310 The Age of the Enlightenment 1685-1789. Full Course.** C. O'Keefe S.J.

A study of the European Enlightenment with emphasis on its development in France; the main themes in the movement will be explored, e.g. nature, reason, tolerance, progress, happiness, etc.: the careers of the leading philosophes and their chief writings will be examined. Various reactions to the Enlightenment in the eighteenth and nineteenth centuries will be studied.

Seminar: 2 hours per week for two terms.

- 311 Tudor England. Full Course.** R. Tittler

A study of the political, religious and social problems of the Tudor Age (1485-1603). The seminar will consist of regular discussions and individual research papers, centered around the broad themes of the age. It is hoped that students will be able to use primary as well as secondary sources.

Seminar: 2 hours per week for two terms.

Offered every other year, alternately with History 333.

- 313 The Russian Revolutions of 1905 and 1917. Full Course.**

Discussions and regular brief reports in order to provide a foundation for a research paper which will be read in class, discussed, revised and then resubmitted in final form at the end of the academic year.

Seminar: 2 hours per week for two terms.

- 314 East Asia Today. Full Course.** R. Porter

The first term will deal with the Chinese Revolution; the second term with Japan since World War II.

Seminar: 2 hours per week for two terms.

- 317 War, Revolution and Social Change in 20th Century Europe. Full Course.** W. Hubbard
(Not offered 1971-72)

An investigation of the impact of war and revolution on European thought, politics and society in the twentieth century. The origins of both World Wars, and their role in accelerating social change will be considered.

Offered every other year, alternately with History 305.

- 318 Problems in American History. Full Course.** W. Akin

An intensive study of selected themes in recent American history. Emphasis upon historiography, social and intellectual history.

Seminar: 2 hours per week for two terms.

- 325 Man Before History. Full Course.** Staff

Listed as Classics 372 and may be taken either as a History or Classics course.

Seminar: 2 hours per week for two terms.

- 327 Medieval Society. Full Course.** R. Coolidge

A problematic approach with the purpose of analysing social groupings in the Middle Ages.

Seminar: 2 hours per week for two terms.

- 332 Québec and the Maritimes. Full Course.** R. Morgan

A comparative study of Québec and the Maritimes as distinct regions of Canada, comparing and contrasting their economic, social and political developments.

Seminar: 2 hours per week for two terms.

- 333 Religious Dissent and Social Protest in the English Tradition. 1500-1832. Full Course.** R. Tittler
(Not offered 1971-72)

Examination of the Dissenting Religious groups in the English tradition, including the Lollards, Puritans, Presbyterians, Baptists, Quakers, Methodists, etc., and their impact on society and social protest movements.

Seminar: 2 hours per week for two terms.

Offered every other year, alternately with History 311.

- 400 Honours History Tutorial. Full Course.** Staff

The history tutorial is open to honours students in history only. All honours students in history must select an area of concentration from the list below, and a tutorial director. The tutorial director will supervise an intensive reading program in the student's area of special interest, and consult with the student individually to discuss his reading programme.

- 01 North American History
- 02 British History
- 03 Ancient History
- 04 European History, 400-1660
- 05 European History, 1660 to the present
- 06 The Third World.

- 500 Honours History Thesis.** Staff

Optional project open to history honours students only. At the end of the second year students must choose, in consultation with their tutorial director, a research topic for intensive analysis during the third year. The student will independently research the topic and present a paper at the end of the third year. Students may concentrate in the same areas of concentration as for History 400.

INTERDISCIPLINARY STUDIES

The Department of Interdisciplinary Studies offers a self-elected Major to students who do not wish to limit themselves to the usual disciplines. Through this self-elected Major a student may choose a theme or a period and, with the help of the Dean of Arts, arrange a special program of studies leading to the Bachelor of Arts degree Major in Interdisciplinary Studies.

- Comparative Literature 310. The Hero, The Anti-Hero; Their Quests. Full Course.**
(Not offered 1971-72)

A critical study of representative types of the hero and the anti-hero; the course will give particular attention to the analysis of the different quests of these figures. Authors studied will include Chrétien de Troyes, Wolfram von Eschenbach, Goethe, Byron, Shelley, Rousseau, Stendahl, Camus and Pinter.

- Comparative Literature 320. Women in 19th and 20th century Literature. Full Course.**

M. Andersen

Designed to enlighten women in their search for themselves and to help men in their attempt to understand women, the course will show women as seen by both female and male writers. The student will see women in different periods, different countries, different social milieux, while examining at the same time a variety of literary styles and trends. If possible, both English and French will be used as the languages of instruction.

Lectures: 3 hours per week for two terms.

Texts: Lessing, *Minna von Barnhelm*; Mme de Lafayette, *La Princesse de Clèves*; Kleist, *Das Käthchen von Heilbronn*; Balzac, *La Femme de trente ans*; Flaubert, *Madame Bovary*; Ibsen, *The Doll's House*; Strindberg, *The Father*; Henry James, *Portrait of a Lady*; Virginia Woolf, *To the Lighthouse*; Montherlant, *Pitié pour les femmes*; S. de Beauvoir, *Mémoires d'une jeune fille rangée*; Doris Lessing, *The Golden Notebook*; Margaret Atwood, *The Edible Women*; Anne Hébert, *Kamouraska*.

- Social Change 400. The Native Peoples of Canada. Full Course.** G. Valaskakis
(Offered in the Evening Division)

Examines the crisis of the native peoples of Canada from a multi-discipline perspective. Participants shall include not only the Loyola Community but Indian and White experts from throughout Canada, and a strong contingent of Indians from the Montreal area. The course attempts to set forth the magnitude of this crisis and ends by asking how the native peoples will be able to control their own lives and future. Guest Speakers are invited from across Canada.

Social Change 410. Women in Modern Society. Full Course. **M.Andersen**
(Offered in the Evening Division)

An interdisciplinary course designed to explore the changing role of women in nineteenth and twentieth century society. The subject will be approached with the assistance of lecturers from various disciplines such as history, theology, philosophy, sociology, economics, psychology and the arts.
Classes will consist of lectures, panel discussions and seminars.

MATHEMATICS

Department Chairman **A.J. Prillo**

Courses leading to an Honours B. Sc. in Mathematics.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Mathematics 322	Mathematics 340	Mathematics 536
Mathematics 324	Mathematics 402	Mathematics 560
Mathematics 326	Mathematics 424	Two courses from:
Mathematics 334	Mathematics 434	Mathematics 502,
	Mathematics 436	520, 540, 571-573, 580.
Cognate Elective*	Cognate Elective*	Elective **
Elective	Elective**	

Courses leading to a B. Sc. with a Major in Mathematics.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Mathematics 324	Mathematics 326	Mathematics 436
Mathematics 334	Mathematics 402	Two Mathematics courses from:
Mathematics 340	Mathematics 434	Third Year Honours Courses
Cognate Elective*	Cognate Elective*	Elective
Elective	Elective**	Elective**

Courses leading to a B. Sc. in Mathematics.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Mathematics 334	Mathematics 324	Mathematics 326
Mathematics 340	Mathematics 402	Mathematics 434
Cognate Elective*	Elective	Mathematics 436
Elective	Elective	Elective
Elective	Elective**	Elective**

Courses leading to a B.A. with a Major in Mathematics.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Mathematics 324	Mathematics 326	Mathematics 436
Mathematics 334	Mathematics 434	Two Mathematics courses
Mathematics 340 or		from: Third Year Honours
Mathematics 402	Elective	Courses.
Elective	Elective	Elective
Elective	Elective**	Elective**

* An elective chosen in consultation with the department. The course would normally be one in which mathematics has been or could be applied; e.g., Physics, Economics, Psychology, Business Administration, Computer Science.
** These electives may have to be taken from a specified list of courses approved by Senate.

The fourth year of the old Mathematics Programmes will be found on pages 274f.

MATHEMATICS

Note: Those students who want to proceed to a B.A. with Major in Mathematics should take Mathematics 131 in the first collegial year and Mathematics 232 in their second collegial year.

Note also that Mathematics 120 is a prerequisite but can be taken concurrently with Mathematics 131. Students should consult the Chairman of the department.

212 Algebra. Full Course.

Inequalities, complex numbers, theory of equations, determinants and matrices; convergence and divergence of series, Taylor and MacLaurin series.

Prerequisite: Mathematics 114.

Lectures: 2 hours per week for two terms. (Engineering).

Text: To be announced.

301 Elementary Statistics. Half Course.

R.C. Moore and Staff

Empirical frequency. Distributions and Descriptive Measures; Elementary Probability; Populations, Samples and Theoretical Distributions; Sampling Distributions; Estimation of Confidence Intervals; Tests of Hypotheses; two sample techniques; tests for goodness of fit; Regression and Correlation; Analysis of Variance.

Lectures: 3 hours per week, first or second term. (for Non-Math. Students).

Text: *Elementary Statistics* by P.G. Hoel (Wiley).

312 Differential Equations. Full Course.

R. Smith

First order ordinary differential equations. Linear equations with constant coefficients. Laplace transforms. Solutions in series. Systems of linear equations. Boundary value problems. Numerical methods. Introduction to partial differential equations. Introduction to integral equations.

Prerequisite: Mathematics 114.

Lectures: 2 hours per week for two terms. (Engineering).

Text: To be announced.

314 Engineering Mathematics. Full Course.

T.N. Srivastava

Vector Analysis. Line and surface integrals. Transformations in multiple integrals. Divergence and Stokes Theorem. Beta and Gamma functions. Bessel functions. Fourier series. Legendre functions. Line integrals in the complex plane. Analytic functions Cauchy integral formula. Taylor and Laurent expansion. Contour Integration. Conformal mapping. Application of partial differential equations.

Prerequisite: Mathematics 114.

Lectures: 2 hours per week for two terms.

Text: *Advanced Engineering Mathematics* by E. Kreyszig (Wiley).

MATHEMATICS

315 Elements of Engineering Mathematics. Half Course.

T.N. Srivastava

(First half of Mathematics 314)

Vector analysis. Line and surface integrals. Transformation in multiple integrals. Divergence and Stokes theorem. Beta and Gamma functions. Bessel function. Fourier series.

Lectures: 2 hours per week, first term.

Text: *Advanced Engineering Mathematics* by E. Kreyszig (Wiley)

317 Probability and Statistics for Engineers. Half Course.

R.C. Moore

Probability theory; Special Distributions; Binomial, Poisson, Normal, Gamma and Beta distributions. Sampling distributions, Elementary Estimations and Hypotheses testing.

Lectures: 3 hours per week, first term.

Text: to be announced.

322 Topics in Mathematics. Full Course.

E. O'Connor, S.J.

The first part of this course aims at an accurate working familiarity with the following topics; real numbers; decimal approximations; abbreviated methods of computations; inequalities; complex numbers; formal and functional properties of polynomials, polynomial equations; rational functions. The second part embraces the following topics: solution of cubic and quartic equations by radicals; systems of linear equations; determinants; matrices; linear transformations (projecture and complex); symmetric functions of the roots of an equation; approximation of irrational numbers by rationals; impossibility of angle trisection by ruler and compass sequences; limits; summation of series.

Lectures: 3 hours per week for two terms (Honours Mathematics only).

Reference: Courant and Robbins, *What is Mathematics?*. (Oxford).

324 Linear Algebra. Full Course.

J. Soric

The following topics are covered: Linear equations. Vector spaces, Linear transformations, polynomials, determinants, invariant direct-sum decompositions, the rational and Jordan forms, inner product spaces, bilinear forms.

Lectures: 3 hours per week for two terms.

Text: To be announced.

- 326 Modern Algebra. Full Course.** K.N. Majumdar
 This course is an introduction to modern abstract algebra. It includes group theory, rings and their properties, division rings, quaternions, fields, mappings of algebraic systems, rudiments of Galois theory of equations and Galois fields.
 Lectures: 3 hours per week for two terms.
 References: *A Survey of Modern Algebra* by Birkhoff and MacLane.
Topics in Algebra by J.N. Herstein.
Introduction to Modern Abstract Algebra by D.N. Burton (Addison Wesley).
- 332 Advanced Calculus. Full Course.** T.N. Srivastava
 Limits and continuity of a function of two variables; partial differentiation; multiple and line integrals; infinite series; improper integrals. Differential equations.
 Prerequisite: Mathematics 232.
 Lectures: 2 hours per week for two terms (Chemistry).
 Text: To be announced.
- 334 Advanced Calculus. Full Course.**
 Limits, continuity, differentiability of functions of several variables; implicit and inverse function theorems; multiple and line integrals; integrals as functions of parameters; improper integrals, complex analysis.
 Prerequisite: Mathematics 232.
 Lectures: 3 hours per week for two terms.
 Text: To be announced.
- 335 Ordinary Differential Equations for Physicists. Half Course.**
 Ordinary Differential Equations. Linear equations of the first order; with constant coefficients, with variable coefficients; with regular singular points.
 Lectures: 3 hours per week, first term.
 Text: *An Introduction to Ordinary Differential Equations* by Coddington, (Prentice Hall)

- 336 Calculus. Full Course.** A.J. Prillo
 A first course aiming to cover as completely as possible the ordinary techniques and applications of calculus.
 Limits of functions, differentiation and integration of polynomials with applications; second derivative and differentiation of algebraic, exponential and logarithmic functions; curvature; definite integral, differentiation and integration of trigonometric functions; methods of integration, improper integrals; applications of the definite integrals; approximate integrals; partial derivatives; multiple integrals; expansion of functions.
 Lectures: 3 hours per week for two terms.
 Text: To be announced.
- 337 Advanced Calculus and Vector Analysis. Half Course.**
 Vector Calculus. Review of elementary operations, directional derivatives, curvilinear coordinates, differentiation formulas, Green's Theorem in plane and space, Stokes Theorem, Gauss' Theorem.
 Lectures: 3 hours per week, second term.
 Text: *Vector and Tensor Analysis* by Hay (Dover Press).
- 340 Numerical Methods. Full Course.** R. Smith
 A first course in numerical methods with aid of IBM 1620. Elementary Finite Differences, Solution of equations, Computation with series and integrals. Linear systems and matrix methods. Difference equations and relaxation methods. Numerical solutions of differential equations. Principles of automatic computation; methods of Computer programming.
 Prerequisite: Mathematics 232.
 Lectures: 3 hours per week for two terms.
 Text: To be announced.
- 401 Mathematical Statistics. Full Course.** R.C. Moore
 Probability, Discrete and continuous random variables. Distribution functions. Probability generating functions. Characteristic functions. Normal chi-square and F-distributions. Sampling distributions. Confidence intervals. Test of hypotheses. Sufficient statistics maximum likelihood estimation. Correlation, regression.
 Lectures: 3 hours per week for two terms.
 Text: *Statistical Theory* by Lindgren (Macmillan).
 (Will be discontinued after 1972-73)

402 Probability and Statistics. Full Course. R.C. Moore

Frequency Distributions, probability, Binomial, Normal and Poisson Laws, Sampling Theory, Curve Fitting, Distribution of Chi-Squares, F. and T. Hypothesis Testing, Quality Control, Regression Theory, Analysis of Variance, Introduction to Experimental Design.

Prerequisite: Mathematics 232.

Lectures: 3 hours per week for two terms.

Text: To be announced.

424 Algebra. Full Course.

This is a continuation of Mathematics 326. It includes topics such as Galois Theory. Rings and modules, projectivity and injectivity.

Lectures: 3 hours per week for two terms.

Text: To be announced.

434 Ordinary Differential Equations. Full Course. A. Keviczky

First order equations. Linear equations with constant and variable coefficients. Series solutions. Frobenius method. Existence and uniqueness theorems. Sturm Liouville problems. Laplace transform.

Lectures: 3 hours per week for two terms.

Text: *Ordinary Differential Equations* by Earl A. Coddington (Prentice-Hall).

436 Real Analysis. Full Course. K.N. Majumdar

This course is an introduction to rigorous mathematical analysis. It thoroughly covers elementary set theory, theory of sequence, series, tests of convergence, inequalities, real variable theory and Riemann's Integration Theory.

Prerequisite: Mathematics 332.

Lectures: 3 hours per week for two terms.

References: *Theory and Applications of Infinite Series* by K. Knopp (Dover).

Mathematical Analysis by Tom M. Apostol.

Mathematical Analysis by T.M. Flett (McGraw-Hill).

Methods of Real Analysis by R.R. Goldberg (Blaisdell).

502 Probability and Mathematical Statistics.

(Not offered 1971-72)

Axiomatic probability. Random variables, distribution functions, moments, characteristic functions. Laws of large numbers, central limit theorem. Review of classical distributions and elementary sampling distributions. Sufficiency. Elementary decision theory and application to theory of inference and hypotheses testing. Classical statistical techniques, applications to Normal populations. Non-parametric methods. Sequential procedures. Introduction to experimental design. Analysis of variance.

Prerequisite: Mathematics 402.

520 Special Topics in Algebra. Full Course. H. Kim

It includes Rings and Modules. Structure of Groups, Lattices, Categories and adjoint functors and Multilinear Algebra.

Prerequisite: Mathematics 326.

Lectures: 3 hours per week for two terms.

Text: *Algebra* by MacLane and Birkhoff (Macmillan 1967)

536 Real and Complex Analysis. Full Course. E. O'Connor, S.J.

Functions of a Real Variable. Functions of a Complex Variable.

Prerequisite: Mathematics 436.

Lectures: 3 hours per week for two terms.

Texts: *The Theory of Functions*, Part II by K. Knopp (Dover).

540 Numerical Analysis. Full Course. R. Smith

Polynomial approximation, Interpolation, Numerical differentiation quadrature and summation. Numerical solution of ordinary differential equations. Functional approximations, least squares techniques, minimum maximum error techniques. Solution of nonlinear equations. Solution of simultaneous linear equations. Calculation of eigen-values and eigenvectors of matrices.

Prerequisite: Mathematics 340 or permission of Instructor.

Lectures: 3 hours per week for two terms.

Text: *A First course in Numerical Analysis* by A. Ralston (McGraw-Hill 1965)

560 Introduction to Topology. Full Course. J. Soric

This is an introductory course in point-set topology, with a considerable stress on metric spaces. The standard topics are covered: sets and functions, metric spaces, topological spaces, compactness, separation axioms, connectedness, approximation.

Prerequisite: Mathematics 436 or permission of Instructor.

Lectures: 3 hours per week for two terms.

Text: *Introduction to Topology and Modern Analysis* by Simmons (McGraw-Hill).

MATHEMATICS

- 571

Geometry I. Half Course.

Dual Vector Space. Contravariant and covariant vectors. Tensor product. Tensors of higher order. Manifold. Tangent vector spaces. Tensors. Connections. Covariant derivatives, curvature tensor. Parallel displacement, Geodesics. Geodesics and Riemannian coordinates.

Lectures: 3 hours per week, first term.

Text: To be announced.

T.N. Srivastava
- 573

Goemetry II. Half Course.

Introduction to topological space. Types of topological spaces. Triangulation and classification of a compact surface. Simplicial complexes. Homotopy theory. Fundamental group. Free group and free product of groups. Homology theory.

Lectures: 3 hours per week, second term.

Text: To be announced.

T.N. Srivastava
- 580

Number Theory. Full Course.

This course covers the standard classical results of Fermat, Euler, Gauss and others relating to arithmetical functions, theory of congruences, detailed study of quadratic congruences, some additive number theory. Bertrand "postulate", elementary distribution theory of primes.

Lectures: 3 hours per week for two terms.

References: *An Introduction to the Theory of Numbers* by Hardy & Wright (Oxford)

Topics in Number Theory, Vol I and II, by le Veque.

K.N. Majumdar
- 591

History of Mathematics. Half Course.

The development of Mathematics from ancient to modern times, including study of prominent mathematicians and their works. Problems will be worked using both modern and historical approaches.

Lectures: 1 hour per week for two terms.

Text: *An Introduction to the History of Mathematics* by H. Eves. (Rev. Edition) (Holt, Rinehart & Winston).

E. O'Connor, S.J.

MODERN LANGUAGES

MODERN LANGUAGES

Department Chairman
PROGRAMMES

C. Fonda

	Required Courses	Electives	Languages Available
MAJOR	7	8*	German Italian Spanish
JOINT MAJORS	9 (5-4)	6*	German Italian Russian Spanish Linguistics
HONOURS	9	6*	German Italian Spanish
JOINT HONOURS	12 (6 - 6)	3*	German Italian Spanish

* One of these electives in both University II and III may have to be taken from a specified list of courses approved by Senate.

Courses leading to a B.A., with a double Major in French and one of the Modern Languages.		
UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
French 310 or 312 French (either F. 342 or F. 344) French (either F. 360 or F. 364) 2 courses (Modern Language)	French 421 French (either F. 423 or F. 425) French 432 2 courses (Modern Language) Elective*	French (one of F. 540 F. 542 and F. 544) French 572 2 courses (Modern Language) Elective*
5 courses	5 courses	5 courses

* These electives may have to be taken from a specified list of courses approved by Senate.

In addition to the above programmes, students may also obtain a B.A. with a joint major or joint honour in a Modern Language and another discipline such as Economics, French etc. Students wishing to enroll in such a programme should consult the Chairman of the Department of Modern Languages and the Chairman of the other field of specialization.

Note: Russian and Linguistics are available in the JOINT MAJOR programme only.

There is no gradation or progression from courses 316 to 580.

The fourth year of the old Modern Languages Programme will be found on pages 274f.

COURSES OFFERED BY THE DEPARTMENT OF MODERN LANGUAGES IN ENGLISH

(There is no gradation or progression from one course to another in this section).

LINGUISTICS. (No prerequisites)

300 Introduction to Linguistics. Full Course. (Not offered 1971-72)

The nature of language. The methods of language analysis. Introduction to phonology, morphology and syntax. Principles of foreign language instruction.

310 Historical and Comparative Linguistics. Full Course. (Not offered 1971-72)

The major language families of the world, especially the Indo-European languages. The history of the major European languages. Exercises in etymology and semantics.

350 Language in Culture and Society. Full Course. C. Fonda

Interrelations of language and other aspects of culture. The cultural content of language materials. Gestalt Theory and Language. Semantic problems in grammatical systems and lexemes.

Lectures: 3 hours per week for two terms.

400 Sociolinguistics. Full Course. (Not offered 1971-72)

The interaction of linguistic and social structures. Languages in contact. Indigenous and immigrant languages in North America, Dialectology and lexicography.

500 Linguistics Applied to Language Learning. Full Course. H. Scheer

Contrastive linguistic analysis of English and other languages as related to language learning. Special attention will be given to French, German, Italian, Russian and Spanish.

Lectures: 3 hours per week for two terms.

CIVILIZATION COURSES (No prerequisites).

316 The Civilization of German Speaking Peoples. Full Course. (Offered in the Evening Division).

Cultural and scientific achievements. Economic, political, social and linguistic problems of today.

316 Italian Civilization. Full Course. (Offered in the Evening Division).

Cultural and scientific achievements. Economic, political, social and linguistic problems of contemporary Italy.

316 Russian Civilization. Full Course. (Not offered 1971-72)

Cultural and scientific achievements. Economic, political, social and linguistic problems of contemporary Russia.

316 Spanish-American Civilization. Full Course. M. Trsic

Cultural and scientific achievements. Economic, political, social and linguistic problems of contemporary Spanish-America.

Lectures: 3 hours per week for two terms.

GERMAN LANGUAGE AND LITERATURE.

- 100 Elementary German. Full Course.** **H. Famira and Staff.**
An introductory course for students with little or no knowledge of German.
Lectures: 3 hours per week for two terms.
Lab: 1 hour per week for two terms.
- 200 Intermediate German. Full Course.** **H. Famira and Staff**
Practice in grammar and conversation; composition; readings from modern German authors.
Lectures: 3 hours per week for two terms.
Lab: 1 hour per week for two terms.
- 300 Introduction to German Studies. Full Course.**
(Not offered 1971-72)
The language, civilization and literature of the German peoples. Origin and history of the language, grammar, syntax, Germany today.
- 306 Readings in German Literature. Full Course.**
(Not offered 1971-72)
A study of literary genres and trends of German literature. Critical analysis of the works studied.
- 320 Survey of German Literature 800-1750. Full Course.**
(Not offered 1971-72)
A chronological consideration of the main currents of German literature from its beginning to 1750.
- 370 Stylistic and Advanced Conversation. Full Course.** **H. Scheer**
Introduction to comparative stylistics, Vocabulary expansion by word formation and derivation, by synonymy and idiomatic structures. Selected grammar problems. Analysis of texts.
Prerequisite: German 200 or equivalent.
Lectures: 3 hours per week for two terms.
- 410 German Literature of the 19th Century. Full Course.** **H. Scheer**
A study of representative works of Buchner, Grillparzer, Gotthelf, Hebbel, Stifter, Keller, Fontane, Hauptmann, etc. (Some of them in translation).
Prerequisite: German 200 or equivalent.
Lectures: 3 hours per week for two terms.

- 470 Theatre Workshop. Full Course.**
(Not offered 1971-72)
Examination of the principal works of two or three major dramatists. Performance of two plays: one in the first and one in the second semester. Introduction to the theory and practice of stage production. Phonetics and diction.
Permission of the Department is required for enrolment in this course.
- 480 Introduction to the German "Novelle". Full Course.**
(Not offered 1971-72)
The "Novelle" as an example of highly sophisticated formal achievement in German literature.
- 540 Classicism. Full Course.**
(Not offered 1971-72)
The preclassic and classic period of German literature with its philosophical background.
- 560 Literature of the Romantic Period. Full Course.**
(Not offered 1971-72)
Romanticism as a universal attitude. Writings of the major Romantic authors, their theories and realizations.
- 570 Contemporary German Literature. Full Course.** **H. Famira**
A study of literary trends in Germany since 1933. Literature in Hitler-Germany, German Emigrant literature, the literature in East Germany, reevaluation of German thinking in Western Germany after 1945. (Mann, Hesse, Durrenmatt, Frisch, Grass, Brecht, e.a.)
Prerequisite: German 200 or equivalent.
Lectures: 3 hours per week for two terms.
- 580 Tutorial. Full Course.** **Staff**
A course designed to meet individual needs of advanced students. Guided readings in German literature under the supervision of the Department. Written and oral criticism of the works studied.
Prerequisite: German 200 or equivalent.
Lectures: 3 hours per week for two terms.

ITALIAN LANGUAGE AND LITERATURE.

- 100 Elementary Italian. Full Course.** **A. Costanzo and Staff**
 A basic introduction to the language for students with little or no knowledge of Italian. This course is designed to develop understanding, speaking, reading and writing of Italian.
 Lectures: 3 hours per week for two terms.
 Lab: 1 hour per week for two terms.
- 200 Intermediate Italian. Full Course.** **C. Di Michele, A. Costanzo and Staff**
 Further practice in speaking, reading and writing, with a systematic review of grammar. Introduction to Italian literature and civilization.
 Lectures: 3 hours per week for two terms.
 Lab: 1 hour per week for two terms.
- 300 Introduction to Italian Studies. Full Course.**
 (Not offered 1971-72)
 The language, literature and civilization of Italy. Origin and evolution of the Italian language. Italy today.
- 306 Readings in Italian Literature. Full Course.**
 (Not offered 1971-72)
 A study of the literary genres and trends of Italian literature. Critical analysis of the works studied.
- 320 Survey of Italian Literature. Full Course.**
 (Not offered 1971-72)
 A history of Italian literature from the Middle Ages to the present. Emphasis on the major writers of Italy.
- 370 Advanced Composition and Stylists. Full Course.** **C. Di Michele**
 Creative writing. Stylistic theories and analysis of literary styles.
 Prerequisite: Italian 200 or equivalent.
 Lectures: 3 hours per week for two terms.
- 400 Literature of the 17th and 18th Centuries. Full Course.**
 (Not offered 1971-72)
 A study of the principal literary trends of the seventeenth and eighteenth centuries. Emphasis on Marino, Metastasio, Vico, Parini, Goldoni, Alfieri.

- 410 Literature of the 19th Century. Full Course.** **C. Di Michele**
 A study of the principal literary trends of the nineteenth century. Emphasis on Foscolo, Leopardi, Manzoni, Carducci, Pascoli, Verga, D'Annunzio.
 Prerequisite: Italian 200 or equivalent.
 Lectures: 3 hours per week for two terms.
- 420 Italian Literature of the 20th Century. Full Course.**
 (Not offered 1971-72)
 Evolution of Italian literature since 1900. A study of representative works of poetry, drama and the novel. Emphasis on Pirandello, Ungaretti, Montale, Quasimodo, Silone, Pavese, Moravia.
- 440 Dante. Full Course.** **A. Costanzo**
 A study of Dante's life, background and works. Reading and analysis of the *Divina Commedia*.
 Prerequisite: Italian 200 or equivalent.
 Lectures: 3 hours per week for two terms.
- 470 Theatre Workshop. Full Course.**
 (Not offered 1971-72)
 Examination of the principal works of two or three major dramatists. Performance of two plays: one in the first and one in the second semester. Introduction to the theory and practice of stage production. Phonetics and diction.
 Permission of the Department is required for enrolment in this course.
- 500 Literature of the Middle Ages. Full Course.**
 (Not offered 1971-72)
 Origin and development of Italian literature from the Sicilian School, the *Dolce Stil Novo*, through Petrarch and Boccaccio. Emphasis on the *Canzoniere* and the *Decameron*.
- 510 Literature of the 15th Century. Full Course.**
 (Not offered 1971-72).
 The rise of humanism in Italy. A study of representative works of the fifteenth century. Emphasis on Pulci, Boiardo, Lorenzo de' Medici, Poliziano, Leonardo da Vinci and Sannazaro.

MODERN LANGUAGES

- 520 Literature of the 16th Century. Full Course.**
(Not offered 1971-72)
Study of the Renaissance in Italy. Emphasis on Machiavelli, Ariosto, Tasso.
- 580 Tutorial. Full Course. Staff**
A course designed to meet individual needs of advanced students. Guided readings in Italian literature under the supervision of the Department. Written and oral criticism of the works studied.
Prerequisite: Italian 200 or equivalent.
Lectures: 3 hours per week for two terms.

RUSSIAN LANGUAGE AND LITERATURE.

- 100 Elementary Russian. Full Course. E. Sidorenko**
An elementary course in reading, writing and grammar for students with little or no knowledge of Russian.
Lectures: 3 hours per week for two terms.
Lab: 1 hour per week for two terms.
- 200 Intermediate Russian. Full Course. H. Skulski**
Review of and practice in Russian grammar, composition, reading and conversation with some material from modern Russian writers.
Lectures: 3 hours per week for two terms.
Lab: 1 hour per week for two terms.
- 300 Introduction to Russian Studies. Full Course.**
(Not offered 1971-72)
The language, literature and civilization of Russia. Origin and evolution of the Russian language. Russia today.
- 306 Readings in Russian Literature. Full Course.**
(Not offered 1971-72)
A study of the literary genres and trends of Russian literature. Critical analysis of the works studied.
- 320 Survey of Russian Literature. Full Course.**
(Not offered 1971-72)
A study of the development of Russian literature from the origins to the end of the nineteenth century.

MODERN LANGUAGES

- 580 Tutorial. Full Course. Staff**
A course designed to meet individual needs of advanced students. Guided readings in Russian literature under the supervision of the Department. Written and oral criticism of the works studied.
Prerequisite: Russian 200 or equivalent.
Lectures: 3 hours per week for two terms.

SPANISH LANGUAGE AND LITERATURE

- 100 Elementary Spanish. Full Course. M. Trsic and Staff**
Introduction to the language for students with little or no knowledge of Spanish. Understanding, speaking, reading and writing of Spanish.
Lectures: 3 hours per week for two terms.
Lab: 1 hour per week for two terms.
- 200 Intermediate Spanish. Full Course. F. Antolín, M. Trsic and Staff**
A study of Spanish language through selected literary texts. Grammar review. Emphasis on conversation and composition. Introduction to Spanish and Spanish-American literature.
Lectures: 3 hours per week for two terms.
Lab: 1 hour per week for two terms.
- 300 Introduction to Spanish Studies. Full Course.**
(Not offered 1971-72)
The language, literature and civilization of Spain and Spanish America. Origin and evolution of the Spanish language. Spain and Spanish-America today.
- 306 Readings in Spanish Literature. Full Course.**
(Not offered 1971-72)
A study of the literary genres and trends of Spanish literature. Critical analysis of the works studied.
- 320 Survey of Spanish Literature. Full Course.**
(Not offered 1971-72)
The evolution of Spanish literary trends from the Middle Ages to the present as illustrated by representative works.

- 370 Advanced Composition and Stylistics. Full Course.** S. Gulizia
Analysis of selected Spanish and Spanish American literary masterpieces. Creative composition and comparative stylistics.
Prerequisite: Spanish 200 or equivalent.
Lectures: 3 hours per week for two terms.
- 410 Spanish Literature of the 18th and 19th Centuries. Full Course.** F. Antolín
Study of the principal authors and works of the Enlightenment. The emergence of Romanticism in Spain as reflected in the most representative poets, dramatists and novelists. The Realistic novel in Spain.
Prerequisite: Spanish 200 or equivalent.
Lectures: 3 hours per week for two terms.
- 420 Spanish Literature of the 20th Century. Full Course.**
(Not offered 1971-72)
Study of the novel, theatre, essay and poetry. Emphasis on the works of J.R. Jimenez, Lorca. Literary trends since the Spanish Civil War.
- 450 The Literature of Spanish America (1500-1900). Full Course.**
(Not offered 1971-72)
Precolombian literature. The writers of colonial and independence periods. Spanish American Romanticism.
- 470 Theatre Workshop. Full Course.**
(Not offered 1971-72)
Examination of the principal works of two or three major dramatists. Performance of two plays: one in the first and one in the second semester. Introduction to the theory and practice of stage production. Phonetics and diction.
Permission of the Department is required for enrolment in this course.
- 500 Literature of the Middle Ages. Full Course.**
(Not offered 1971-72)
Study of Spanish literary works from 1140 until 1500.
- 510 Literature of the Golden Age. Full Course.** F. Antolín
Poetry, drama and novel of the sixteenth and seventeenth centuries. Special emphasis on Don Quijote of Cervantes.
Prerequisite: Spanish 200 or equivalent.
Lectures: 3 hours per week for two terms.

- 530 Generation of 1898. Full Course.**
(Not offered 1971-72)
A study of the principal writers of this generation: Unamuno, Baroja, Azorín, Maeztu, Machado, Valle-Inclán, etc.
- 550 Spanish American Literature of the 20th Century. Full Course.**
(Not offered 1971-72)
Poetry, drama, novel and essay. Emphasis will be placed on the novels dealing with the Mexican Revolution, Indian and social problems of South America.
- 580 Tutorial. Full Course.** Staff
A course designed to meet individual needs of advanced students. Guided readings in Spanish and/or Spanish American literature under the supervision of the Department. Written and oral criticism of the works studied.
Prerequisite: Spanish 200 or equivalent.
Lectures: 3 hours per week for two terms.

PHILOSOPHY

PHILOSOPHY

Department Chairman J.D. Morgan

Courses leading to an Honours B.A. in Philosophy

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III ¹
Philosophy 500	Philosophy 502	Philosophy 504
Philosophy 410	Philosophy 420	Philosophy 430
Philosophy Elective ²	Philosophy Elective ²	Philosophy Elective ²
Elective ⁴	Elective ⁴	Elective ⁴
Elective ⁴	Elective*	Elective*

* These electives may have to be taken from a specified list of courses approved by Senate.

1. Students graduating in 1972 must have completed the following philosophy courses in addition to the university requirements at the time of their entrance.
 - a) three courses in the history of philosophy
 - b) one course in ethics
 - c) one course in epistemology
 - d) one course in logic
 - e) two tutorials or seminars
 - f) two philosophy electives
2. To be chosen in consultation with the chairman.
3. In certain cases students may reorder the sequence of systematic and historical courses in consultation with the department.
4. The student must complete five courses outside of Philosophy.

Courses leading to a B.A. with a Major in Philosophy.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III ¹
Philosophy 500	Philosophy 502	Philosophy 504
or other Logic course	or other course in	or other course in
History of Philosophy	moral philosophy	metaphysics or
Elective ⁴	History of Philosophy	epistemology
Elective ⁴	Elective ⁴	Philosophy Elective ²
Elective ⁴	Elective ⁴	Elective ⁴
	Elective*	Elective*

* These electives may have to be taken from a specified list of courses approved by Senate.

PHILOSOPHY

1. Students graduating in 1972 in addition to completing the university requirements, must have completed the following philosophy courses:
 - a) three courses in the history of philosophy
 - b) one course from ethics, or epistemology, or logic
 - c) two seminars or tutorials.
2. To be chosen in consultation with the chairman.
3. In certain cases, students may reorder the sequence of systematic and historical courses in consultation with the department.
4. The student must complete five courses outside Philosophy.
The fourth year of the old Philosophy Programmes will be found on pages 274 f.

COURSES OF AN INTRODUCTORY NATURE.

302 Historical Questions in Philosophy. Full Course.

(Not offered 1971-72)

A consideration of major problems in Philosophy and types of answers given to them.

Lectures: 3 hours per week for two terms.

Open only to students with no previous philosophy.

305AB Philosophie: La Liberté. Half Course. First or Second Term.

V. McNamara

Principales théories anciennes et récentes. Les grands régimes d'organisation de la société du point de vue de la liberté: libéralisme, totalitarisme, socialisme, démocratie.

Lectures: 3 heures par semaine, premier ou deuxième semestre.

306 Fundamental Problems of Philosophy. Full Course.

(Not offered 1971-72)

The aim of the course is to explain and deepen the meaning of certain philosophical concepts through the study of selected authors from ancient and modern philosophy. The course intends to be an introduction to metaphysics, epistemology and ethics.

Lectures: 3 hours per week for two terms.

Open only to students with no previous philosophy.

308 The Nature of Enquiry. Full Course.
(Not offered 1971-72)

An attempt to formulate certain questions which are central to an understanding of contemporary society. This will resolve around two poles; on the one hand attention will be given to society as a whole and the factors influencing its development. On the other hand specific attention will be given to the role of man within this context, and various issues will arise concerning knowledge, human values, art and metaphysics. Of particular interest will be the very act of questioning itself.

Lectures: 3 hours per week for two terms.

Authors to be studied: R. Descartes, A. Koestler, D. Schen, J. Haligood, A. Camus, M. McLuhan, A.N. Whitehead, N. Polanyi, K. Popper.

Open only to students with no previous philosophy.

309B Futurontology. Half Course. Second Term.

J. McGraw

A two-semester introduction to philosophy with a special emphasis on metaphysical or ontological "schools" including realism, idealism, pragmatism, logical empiricism, existentialism and organicism, stressing relationships to possible metaphysical (ontological) positions of the future (futurontology) and to other fields of philosophy, (past, present and future), including epistemology, philosophy of science, philosophy of man, aesthetics, ethics, social philosophy, philosophy of God, and the philosophy of history. The course essentially is a consideration of the possibilities of unifying contemporary and futuristic individual man and mankind in regard to his multi-dimensional personal and extra-personal existence.

Lectures: 3 hours per week, second term.

Texts: a. *Living Issues in Philosophy* by Harold W. Titus

b. *The Futurist*: A monthly periodical published by the World Future Society.

Open to all students.

PROBLEM CENTRED COURSES

310 Ethics. Full Course.

(Not offered 1971-72)

A consideration of principles underlying moral evaluation, with reference to classical and other positions.

Lectures: 3 hours per week for two terms.

Open to all students.

311A Principles of Ethics. Half Course. First Term.

J. Morgan

A study of the Aristotelean, Natural Law, Kantian, Utilitarian and Pragmatic approaches to morality.

Lectures: 3 hours per week, first term.

Texts: Aristotle, *Nicomachean Ethics*

Kant, *Fundamental Principles of the Metaphysics of Morals*

Mill, *Utilitarianism*

James, *Essays in Pragmatism*

McGlynn & Toner, *Modern Ethical Theories*

Open to all students.

312 Moral Philosophy. Full Course.

E. Egan

The meaning of situation ethics over against the problem of the moral absolute; the religious and metaphysical implications of ethical options; the relation of joy to moral wholeness and maturation. A criteriology for morals will be sought through an open discussion of concrete problems with special attention to sex, violence and money.

Lectures: 3 hours per week for two terms.

Readings include: Walter Dirlss, Gabriel Marcel, Jacques Leclercq, Henri Duméry and Paul Ricoeur..

Open to all students.

315B Medical Ethics. Half Course. Second Term.

J. Morgan

The application of ethical principles to specific problems of the practice of medicine.

Prerequisite: Philosophy 310, 311, 312.

Lectures: 3 hours per week, second term.

317B Business Ethics. Half Course. Second term.

J. Morgan

The application of ethical principles to specific problems in business practice.

Prerequisite: Philosophy 310, 311, 312.

Lectures: 3 hours per week, second term.

322 Advanced Political Philosophy: Communism, Fascism and Democracy. Full Course.
V. McNamara

Treats of the theoretical foundations of Communism, Fascism and Democracy through the reading and discussion of selected texts.

Prerequisite: One previous Philosophy course.

Lectures: 3 hours per week for two terms.

Text: *Communism, Fascism and Democracy*, ed. Carl Cohen.

323A Social Philosophy. Half Course. First Term. V. McNamara

The course treats of the individual in relation to Society through the reading and discussion of selected texts. Problems treated: classical images of man: personality and society; the paradox of social control.

Lectures: 3 hours per week, first term.

Text: *Political Man and Social Man*. Ed. Robert Wolff.

Open to all students.

324 Philosophie Politique. Full Course.

(Not offered 1971-72)

Analyse moderne et examen critique des sources classiques et modernes du communisme, du fascisme et de la démocratie.

Prerequisite: un cours de philosophie et la permission du directeur du cours.

Lectures: 3 heures par semaine; deux semestres.

325B Political Philosophy. Half Course. Second Term. V. McNamara

This course treats of the individual in relation to the state through the reading and discussion of selected texts.

Lectures: 3 hours per week, second term.

Text: *Political Man and Social Man*, Ed. Robert Wolff.

Open to all students.

326 Legal Philosophy. Full Course. C. Gray

This course seeks to understand the use of technical sources (e.g. precedent, legislation, custom, value) and concepts (e.g. duty, rule, right, person, property) by legal institutions in terms of traditional philosophical doctrines (e.g. positivism, historicism, natural law, philosophy, realism). Upon this basis, understanding of some topical issues will be sought (e.g., legal insanity, liability, punishment, violence, civil disobedience). An attempt is made to apply both Canadian legal orders (civil and common law) to solutions. Study centers on an anthology (Mark R. MacGuigan, *Jurisprudence; Readings and Cases*, 2nd edition, University of Toronto Press, 1966) which will be subject to lecture and discussion in classes and to application in several papers.

Lectures: 3 hours per week for two terms.

330 Ethics and Society. Full Course.

(Not offered 1971-72)

Classical types and perennial problems of social and political philosophy with particular attention to their moral bases and consequences; a general consideration of classical concepts of legal and moral rights, rules and obligations, authority, the state, freedom and justice as exemplified in the writings of Plato, Aristotle, Aquinas, Hobbes, Locke and Mill; a more detailed consideration of the notions of history, ideology, social violence, technology and work as practiced in contemporary societies and as conceived in the writings of Marxist and non-Marxist social theoreticians.

Lectures: 3 hours per week for two terms.

Open to all students.

331AB Philosophy of the Social Sciences. Half Course. First or Second Term. D. O'Connor

Following the distinction between natural and social sciences, this course will be concerned with philosophies of the social sciences. We will investigate the structure, methodology and problems of these sciences toward understanding and clarifying how they function as quasi-separable disciplines and how they contribute to a wider understanding of man and his varied social relations. This course is recommended only for those who have some background in methods and problems in this area of scientific concern and who have related philosophical interest and/or training.

Lectures: 3 hours per week, first or second term.

Open only to social science students and to others with the permission of the department.

334 Forces Shaping Culture. Full Course.

(Not offered 1971-72)

A tour through various interpretations of contemporary culture. Despite wide diversities all the thinkers have shifted their frame of reference from specialist to comprehensive accounts.

Lectures: 3 hours per week for two terms.

Readings: J.K. Galbraith, *The New Industrial State*. D. Schon, *Technology and Change*. B. Fuller, *Utopia or Oblivion*. J. Jacobs, *The Death and Life of Great American Cities*. L. Mumford, *Art and Technics*. M. McLuhan, *Understanding Media*. E.T. Hall, *The Silent Language*. E.T. Hall, *The Hidden Dimension*. G. Leonard, *Education and Ecstasy*. R.D. Laing, *The Politics of Experience*. P. Drucher, *The Age of Discontinuity*.

340 Metaphysics. Full Course.

(Not offered 1971-72)

Discussion of the question "What is Being?" (Parmenides, Aristotle, Plato) – The Theory of Forms and Aristotle's criticism. Substance – four causes – potentiality and actuality (Aristotle). Causality of *Esse* (St. Th. Aquinas).

Prerequisite: One previous course in Philosophy.

Lectures: 3 hours per week for two terms.

Text: Cornford, *Plato's Theory of Knowledge* (The Theatetus and Sophist of Plato); Aristotle, *Metaphysics*; St. Th. Aquinas, *De Ente et Essentia* (On Being and Essence)

342 Knowing and Reality. Full Course.

(Not offered 1971-72)

A contemporary thinker upholds the thesis that the basic structure of reality, insofar as it lies within human experience, is "isomorphic" with the structure of human knowing and may be deduced from an analysis of the latter. In other words, metaphysics has its basis in cognitional theory. This course will be devoted to an examination of this thesis and of its philosophical implications.

Prerequisite: One previous philosophy course.

Lectures: 3 hours per week for two terms.

350 Epistemology. Full Course.**D. Park**

A study of characteristic problems in epistemology with particular emphasis on the analysis of questions in terms relevant to their historical and systematic contexts.

Prerequisite: One previous philosophy course.

Lectures: 3 hours per week for two terms.

352 Theory of Knowledge. Full Course.

(Not offered 1971-72)

Through selected readings, an attempt will be made to focus attention on the act of discovery and the possibilities it offers to integrate various areas of knowledge.

Prerequisite: One previous philosophy course.

Lectures: 3 hours per week for two terms.

Possible Readings:

R. Blackwell, *Discovery in the Physical Sciences*. W. Gordon, *Synectics*. S. Langer, *Philosophy in a New Key*. B. Schon, *Invention and the Evolution of Ideas*. A. Koestler, *The Act of Creation*. K. Boulding, *The Image*. R. Arnheim, *Art and Visual Perception*. E. Gombrich, *Art and Illusion*. O. Muck, *The Transcendental Method*.

354 Problems in the Theory of Knowledge. Full Course.

(Not offered 1971-72)

Study of the texts of Plato, Aristotle, Thomas Aquinas, Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant and Pierce. Discussion of contemporary trends in philosophy of knowledge.

Prerequisite: One previous philosophy course.

Lectures: 3 hours per week for two terms.

356 Contemporary Theories of Knowing. Full Course.

(Not offered 1971-72)

An analysis of human knowledge with special emphasis on the relationship between philosophic knowledge and the knowledge of the empirical scientist.

Prerequisite: One previous philosophy course.

Lectures: 3 hours per week for two terms.

360 Formal Logic. Full Course.**M. Reidy**

This course is a modern adaptation of authentic Aristotelian Logic. Its aim is to bring the student to a mastery of fundamental logical operations. Part One treats the elements of logical science and concentrates on methods of logical analysis. Part Two treats the operations of logic and concentrates on methods of constructive argument. Part Three treats of various problems which either derive from logical studies or are soluble by the methods of logic.

Lectures: 3 hours per week for two terms.

Texts: Aristotle, *Categories*, *De Interpretations*, *Prior Analytics*,

Readings: Bochenski, *A History of Formal Logic*.

Jager, *Essays in Logic from Aristotle to Russell*.

362 Logic and Scientific Method. Full Course.

(Not offered 1971-72)

The aim of this course is to acquaint the student with basic concepts and techniques of logic, useful in rational argumentation and in scientific approaches. Discussion will include a critical analysis in language, classification of fallacies, Aristotelian syllogistic, symbolic logic and scientific methodology. The role of logic in debate and in creative thinking will also be examined.

Prerequisite: One previous philosophy course.

Lectures: 3 hours per week for two terms.

Texts: A. Hander, *Logic for the Millions*

(Basic Books); I. Copi, *Introduction to Logic*. (Macmillan).

370 Death as a Philosophical Problem. Full Course.
(Not offered 1971-72)

This course treats of man's response to frustration in general, and death — the ultimate frustration — in particular. It attempts to synthesize areas usually in Philosophical Anthropology, Philosophy of God, Ethics, and Philosophy and Literature. Some readings will be in the areas of Sociology and Psychology. The strictly philosophical readings will be, for the most part, from contemporary Russian and Spanish Existentialists.

Lectures: 3 hours per week for two terms.
Open to all students.

372 Philosophy of Man. Full Course.

B. Cavanaugh and C. Gray

The general aim is to dispose the student toward asking some of the basic questions regarding man from a philosophical point of view: his particular characteristics, his origin and his destiny, the various aspects of man's life. The hoped for product of the course should be the assimilation of some basic information about man and practice in the way that philosophy handles such questions. Historical materials provide insights, systematic materials their coherence.

Lectures: 3 hours per week for two terms.
Open to all students.

373B Contemporary Theories of Love. Half Course. Second Term.

J. McGraw

A two-semester topical analysis of love with special emphasis on its metaphysical, epistemological, psychological, axiological and social dimensions. Among the authors to be considered are R. Hazo, E. Fromm, A. Maslow, I. Singer, R. Hay, H. Scheler, K. Horney, J.P. Sartre, L. Lavelle, M. de Unamuno, J. Ortega y Casset, J. Cowburn, I. Lepp, T. Reik, D. de Rougemont, F. Nietzsche, A. Rand and P. Sorokin.

Prerequisite: One previous philosophy course.
Lectures: 3 hours per week, second term.
Text: To be determined.

376 Philosophy of Human Nature. Full Course.

D. O'Connor

This course is designed as an experiment (primarily cognitive) to be carried on by a group under the direction of the professor (who functions chiefly as a resource person). The purpose of the experiment is to increment our understanding of man — especially in his perceptual cognitive and effective behaviour as an individual agent, participant in a culture, and member of groups. Special topics for consideration will be: (A) Patterns of Communication (linguistic and non-linguistic); (B) Learning; (C) Psychosocial Maturation; and (D) The Class Itself in its educational, social and personal dimensions. Because of the nature of the readings (which are taken from artists, philosophers, social scientists of many varieties, etc.) and due to the fact that group participation in a learning experiment is not a part of the regular academic training of many of our students, a certain flexibility, curiosity, maturity and creativeness will be prerequisites for the course.

Lectures: 3 hours per week for two terms.

378 Philosophical Anthropology. Full Course.

A. Kawczak

The aim of this course is a critical analysis and a philosophical synthesis of multi-disciplinary insights into the nature of man, his creative potential and growth. Special attention will be given to the perspectives on man developed in existential psychology and psychiatry.

Lectures: 3 hours per week for two terms.

Readings: K. Dabrowski, A. Kawczak, *The Dynamics of Concepts*. K. Dabrowski, A. Kawczak, M. Piechowski, *Mental Growth*. R. Laing, *The Divided Self: A Study of Sanity and Madness*. A. Camus, *The Outsider*. P. Lefevre, *Understandings of Man*.

380 Philosophy of God. Full Course.

(Not offered 1971-72)

The problem of the natural knowledge of God including readings from Plato, Aristotle, Anselm, Aquinas, Descartes, Hume, Pascal, Kant, Hegel, Feuerbach, Marx, Kierkegaard, Newman, Nietzsche, Sartre, Ayer and Russell.

Prerequisite: One previous philosophy course.
Lectures: 3 hours per week for two terms.

382 Contemporary Religious Philosophy. Full Course.

(Not offered 1971-72)

The course offers a critical assessment of whether in the light of modern developments in Philosophy, contemporary thinking man can responsibly maintain a religious belief in God.

Lectures: 3 hours per week for two terms.

Texts: Ferré Frederick, *Basic Modern Philosophy of Religion*, Charles Scribner Sons, N.Y. Heim Karl, *Christian Faith & Natural Science*, Harper & Row. Whitehead, Alfred North, *Religion in the Making*, World Publishing Co. Whitehead, Alfred North, *Modes of Thought*, Macmillan. Donkins, David, *Guide to the Debate About God*, Westminster Press.

Open to all students.

390 Literature and Philosophy. Full Course.

(Not offered 1971-72)

The course studies the relationship between literature and philosophy. It will cover the works of great writers from ancient to modern times, examining the interpretation they have given to *Life, Man and Society*.

Lectures: 3 hours per week for two terms.

Open to all students.

392 Philosophy of Biology. Full Course.**B. Cavanaugh**

The course presumes some previous and practical knowledge of biology. Its general purpose is to give the biology-oriented student the opportunity to consider some philosophical problems that the science of biology raises. The course should provide the student with the technical skill of cross-relating his biological knowledge to other fields in an effort to shed some light on the problems proper to biology. If the student can gain a wider appreciation of the applications and significance of the problems of biology in terms of human meaning and value, the aim of the course will have been satisfied. As concrete means to the stated aim, we will consider a set of loosely related problems which have a common and strong orientation to human biology: evolution, life, genetics, growth and variation, constitution, sex, and ecology. The classes will be in lecture and seminar form; the student will be responsible for the biological background and the research needed for the adequate presentation of the philosophical consideration of biological problems.

Prerequisite: One previous course in philosophy.

Lectures: 3 hours per week for two terms.

394 Aesthetics. Full Course.**E. Egan**

The notion of creative art as knowledge, as involved in the creation and appreciation of the artifact; taste and value judgement in relation to the ethical, religious and psychological dimensions of art; the relationship of creativity and taste to the social and cultural environments, with critical attention to any dualistic bias which would relegate artistic meaning to "mere aesthetics".

Lectures: 3 hours per week for two terms.

Readings: include Ernst Fischer, H. Marshall, McLuhan, Arnold Hauser, Maritain, Dewey, Van der Leouw, Vivas, Auerbach and Ben Shahn.

396 Philosophy of History. Full Course.**R. Hinners**

(History 280)

The problem of historical knowledge and explanation and its relation to ideological, metaphysical and religious ideas of historical development and of the meaning of history. Study of selected texts of St. Augustine, Hegel, Marx, Heidegger, Collingwood and others.

Prerequisite: One previous course in philosophy.

Lectures: 3 hours per week for two terms.

398 Philosophy of Education. Full Course.**H. Lau**

Examination of philosophical positions underlying educational theory. A study of the problems which arise when a theory of education is put into practice. Consideration of trends in philosophy of education today.

Prerequisite: One previous course in philosophy.

Lectures: 3 hours per week for two terms.

Texts: Arasteh, A.R., *Creativity in the Life Cycle*, Vol. 2, *An Interpretative Account of Creativity in Childhood, Adolescence and Adulthood*, Brill, Leiden, 1968.
Ashton-Warner, Sylvia, *Teacher*, Bantam Books, New York, 1963.
Dewey, John, *Democracy and Education*, The Macmillan Company, New York. (Paperback 1963).
Holt, John, *How Children Learn*, Pitman Publishing Corp., New York, 1967.
Montessori, Maria, *The Absorbent Mind*, Dell Publishing Co. Inc., New York, 1967.
Piaget, Jean, *Six Psychological Studies*, Vintage Books, New York, 1967.
Existential Encounters For Teachers, ed. by Maxine Green, Random House, New York, 1967.

HISTORY OF PHILOSOPHY AND PHILOSOPHICAL MOVEMENTS COURSES.

- 410 History of Ancient Philosophy. Full Course.** M. Reidy
A study of the origin of Western Philosophy in its ancient Hellenic setting and of its extension into the Christian era.
Lectures: 3 hours per week for two terms.
Readings: Allen, R.E., *Greek Philosophy, Thales to Aristotle*.
Clark, G.H., *Selections from Hellenistic Philosophy*.
Open to all students.
- 412 Aristotle. Full Course.**
(Not offered 1971-72)
A thorough study of Aristotle's philosophy in the (translated) texts, including *Categories 1-5 Posterior Analytics, Physics, On the Soul* and *Metaphysics*.
Prerequisite: One previous philosophy course.
Lectures: 3 hours per week for two terms.
- 420 Medieval and Early Modern Philosophy. Full Course.** E. Joos
The aim of the course is to link medieval philosophy with ancient and contemporary problems. The historical and philosophical backgrounds: Plato and the Academy, Late Antiquity; the Greek and Christian *Logos*; Patristic Period; Poltinus and St. Augustine; St. Augustine's *Confessions* and Modern Existentialism; Boethius and Abelard – the problem of Universals; Aristotle's entry into the Middle Ages; St. Th. Aquinas; the continuity of the Augustinian tradition – *The Mind's Road to God* (St. Bonaventure); the early modern philosophers.
Lectures: 3 hours per week for two terms.
Texts: St. Augustine, *The Confessions*. Boethius, *The Consolation of Philosophy*. St. Bonaventure, *The Mind's Road to God*; *Selections from Medieval Philosophers*. ed. R. McKeon.
- 422 Saint Thomas Aquinas. Full Course.**
(Not offered 1971-72)
A study of some basic texts in the writings of Thomas Aquinas and his influence on subsequent philosophy.
Lectures: 3 hours per week for two terms.
Open to philosophy Major and Honour students and others with the permission of the department.

- 430 Modern Philosophy. Full Course.** L. O'Hanley
In this course an attempt will be made to trace the development of philosophical thought from Descartes to Hegel. The emphasis will be placed on philosophical movements or schools rather than on individual philosophers, i.e., Rationalism, British Empiricism, German Idealism, Positivism.
Lectures: 3 hours per week for two terms.
Open to philosophy Major and Honour students and others with the permission of the department.
- 432 British Philosophy. Full Course.**
(Not offered 1971-72)
A detailed examination of some major concepts in the philosophy of Bacon, Francis Locke and Berkeley. A course designed for major and honour students in philosophy.
Prerequisite: A minimum of two previous courses in Philosophy is strongly advised, at least one is required.
Lectures: 3 hours per week for two terms.
- 450 German Philosophy. Full Course.**
(Not offered 1971-72)
German Idealism: a textual study of Kant's *Critique of Pure Reason* and Hegel's *Phenomenology of Spirit*.
Prerequisite: One previous Philosophy Course.
Lectures: 3 hours per week for two terms.
- 452 Development of Marxist Thought. Full Course.**
(Not offered 1971-72)
A brief survey of some major themes in the writings of Marx; a study of the historical development of Marxism as exemplified in such thinkers as Lenin, Trotsky, Lukacs, Gramsci, Althusser and Sartre.
Prerequisite: either Philosophy 423, 313, 318, 333, 410, 417 or Political Science 315, or with the permission of the instructor.
Lectures: 3 hours per week for two terms.

470 Contemporary Philosophy. Full Course. H. Lau

Reading and discussion of selected texts in contemporary philosophy. Special attention will be given to existential philosophies.

Prerequisite: One previous Philosophy course.

Lectures: 3 hours per week for two terms.

Readings: Camus, A., *The Outsider*, Penguin Books Ltd., Harmondsworth, 1942.

Kaufman, W., *Existentialism from Dostoevsky to Sartre*, Maridan Books.

Marcuse, H., *One-dimensional Man*, Beacon Press, Boston, 1964.

Mounier, E., *Existential Philosophies*, Rockcliffe, London, 1948.

Whitehead, A.N., *Adventures of Ideas*, Macmillan Free Press, 1933.

Whitehead, A.N., *Modes of Thought*, Macmillan Free Press, 1938.

472 Existentialism. Full Course. E. Joos

This course is designed especially for science students. Existentialism is taught as an experience or personal involment in philosophical speculations related to man. Authors discussed: St. Augustine, Pascal, Kiekegaard, Nietzsche, Dostoevsky, Heidegger, Marcel, Sartre.

Prerequisite: One previous Philosophy course.

Lectures: 3 hours per week for two terms.

480 American Philosophy. Full Course.

(Not offered 1971-72)

A study of 19th and 20th century American philosophers, with a special emphasis on the pragmatists.

Prerequisite: One previous Philosophy course.

Lectures: 3 hours per week for two terms.

492 Chinese Philosophy. Full Course.

(Not offered 1971-72)

The course in Chinese Philosophy is an introductory course which uses the philosophical history of ancient China as a model to illustrate the rise of philosophical thought in the mind of man. In a sense ancient Chinese philosophy is a preview of the development of Western thought. By reading and studying the ancient Chinese scholars: Confucius, Mo-tzu, Mencius, Chuang-Chou, Lao-Tzu, Sun Tet Sen and lastly, Mao Tse Tung, the student can come to appreciate the philosophical mode of consideration and gain an understanding of the development of Western thought by comparing what he knows of his own intellectual tradition with an alternate line of development. The course is taught from the point of view of a Western philosopher, and there will be several paperbacks to read as well as some short papers to write.

Lectures: 3 hours per week for two terms.

TUTORIALS

300 Problems in Philosophy. Full Course.

Staff

Registration by permission of the professor.

Readings to be arranged with the student.

301AB Problems in Philosophy. Half Course. First or Second Term.

Staff

Registration by permission of the professor.

Readings to be arranged with the student.

318 Natural Law. Full Course.

J. Morgan

Readings in the history of natural law argumentation, its meaning, and its application to contemporary problems.

Prerequisite: 4th year standing and an 80% average in previous philosophy courses. Registration by permission of the professor.

462 Analytic Philosophy. Full Course.

(Not offered 1971-72)

Close classroom study of Ludwig Wittgenstein's two classics, *Tractatus* (1st term) and *Investigations* (2nd term). Personal research on preparatory philosophers and other analysts (1st term), and on alternative theories of language (2nd term). Theory and practice of a methodological philosophizing.

Prerequisite: One previous philosophy course.

482 Bernard Lonergan. Full Course.

(Not offered 1971-72)

Intensive study of insight.

Registration by permission of the professor.

SEMINARS

500 Seminar: Logic. Full Course.

A. Kawczak

The course includes study of: propositional logic; qualification; sets and relations; the authors.

Meetings: 2 hours per week for two terms.

PHILOSOPHY

- 502

Seminar: Moral Philosophy. Full Course.

R. Hinners, L. O’Hanley, E. Egan

This seminar gives philosophy students practice in basic contemporary approaches to problems in moral philosophy as represented by, e.g., analytic philosophy, phenomenology, natural law philosophy, marxism, existence philosophy, personalism, etc. A variety of active philosophers will critically investigate problem areas including: axiology of values; description of relevant organic, psychological and cultural conditions; prescription of responsibilities for duties and rights before self and others.

Meetings: 2 hours per week for two terms.
- 504

Seminar: Metaphysics and Epistemology. Full Course.

R. Hinners, L. O’Hanley, C. Gray

This seminar gives philosophy students practice in basic temporary approaches to problems in metaphysics and epistemology as represented by, e.g., analytic philosophy, phenomenology, marxism, existence philosophy, traditional realism, personalism, etc. A variety of active philosophers will critically investigate problem areas including the conditions of possibility for human knowing; the human activities required to establish and pursue knowledge of being; the role of negativity in existence; the interplay of present existence with possibly available being; the modes in which being can be identified with and adjusted to beings.

Meetings: 2 hours per week for two terms.
- 520

Staff Seminar. (Non-Credit). Full Course.

Staff

A series of papers prepared by the faculty of Loyola, Sir George, McGill and Bishop’s. Highly recommended for all honour students.
- 528

Seminar: Bacon, Locke and Berkeley. Full Course.

D. Park

An in-depth consideration of the writings of Bacon, Locke and Berkeley and a consideration of their influence on contemporary thought.

Prerequisite: Major or honour student in philosophy in 4th year.

Meetings: 2 hours per week for two terms.
- 600

Philosophical Texts in German. (Non-Credit).

Mrs. I. Joos

The purpose of the course is to introduce faculty and students into the understanding of German philosophical texts. The selections are of graded difficulty and are revised according to the interest and need of the faculty and students involved.

Lectures: 2 hours per week for two terms.

PHYSICS

PHYSICS

Department Chairman		C.E. Eappen
Courses leading to an Honours B. Sc. in Physics.		
UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Physics 301	Physics 400	Physics 512
Physics 308	Physics 404	Physics 503A
Physics 311B	Physics 408	Physics 505B
Physics 320	Physics 411A	Physics 514
Mathematics 334	Physics 413B	Physics 511A
Mathematics 335	Physics 420	Elective
Mathematics 337	Elective*	Elective*
Elective		
Courses leading to a B. Sc. with a Major in Physics		
UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Physics 301	Physics 311B	Physics 404
Physics 308	Physics 400	Physics 411A
Physics 320	Physics 408	Physics** 512
Mathematics 334	Physics 420	Physics** 503A
Mathematics 335	Elective*	Physics** 505B
Mathematics 337		Physics 514
Elective		Physics 511A
		Elective*
Courses leading to a B. Sc. in Physics.		
UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Physics 301	Physics 408	Physics 402
Physics 300	Physics 414	Physics 407
Physics 305	Mathematics 402	Physics 405
Physics 324	Science Elective	Computer Science
Science Elective	Elective*	Science Elective
Elective		Elective*

* These electives may have to be taken from a specified list of courses approved by Senate.

** One full course from these will be chosen.

The fourth year of the old Physics Programmes will be found on pages 274 f.

300 Electricity and Magnetism. Full Course. R.L. Kovacs, C.S. Kalman

This course treats the following topics:

Coulomb's law, Gauss's law, Electric potential, capacitance, polarization, Resistance and current, D.C. circuit analysis. Insulator, conductor, and semi-conductor, ammeters and voltmeters, and associated instruments, Thermoelectricity. Magnetic induction, Ampere's law, induced EMF. Lenz's principle, Magnetization, Magnetic properties of matter. Vacuum triode and solid state devices.

Prerequisites: One full course in Physics and one full course in Calculus.

Lectures: 3 hours per week for two terms.

Lab: 3 hours per week for two terms.

Text: Duckworth, *Electricity and Magnetism*.

301 Optics. Half Course. C.E. Eappen

Principles of Geometrical and Physical Optics. Interference. Diffraction. Polarization. Double Refraction.

Prerequisite: One full course in Physics and one full course in Calculus.

Lectures: 3 hours per week, one term.

Lab: 3 hours per week, one term.

Text: Morgan, *Introduction to Geometrical and Physical Optics*, McGraw-Hill.

305 Physics. Properties of Matter I. Half Course. H.J. MacPhee, S.J.

Units and dimensions, theory of errors, meaning and determination of the acceleration due to gravity, measurement of the newtonian constant of gravitation G, Elasticity, its moduli and application to bending moments and torsion, Compressibility of solids and liquids, seismic waves.

Prerequisite: One full course in Physics and one full course in Calculus.

Lectures: 3 hours per week, one term.

308 Electricity and Magnetism. Full Course. J. Shin

This course treats the following topics:

Coulomb's law. Electric fields, Gauss's law. Electric potential. capacitance, polarization. Displacement vector, Boundary conditions. Resistance and current D.C. circuit analysis. Magnetic fields, Ampere's law., induced EMF, interaction, of moving charge with magnetic field. Mutual and self-inductance. Lenz's principle. Magnetization Para-, dia- and ferromagnetism. Steady state A.C. circuit analysis. Maxwell's equations, Solutions to Laplace equation. EM plane waves Poynting vector, vector potential.

Prerequisite: One and one-half courses in Physics and two full courses in Calculus.

Lectures: 3 hours per week for two terms.

Lab: 3 hours per week for two terms.

Text: A.F. Kip, *Fundamentals of Electricity and Magnetism*.

311B Mechanics. Half Course. Second Term. H.J. MacPhee, S.J.

Basic concepts. Kinematics of a particle in straight line motion. Newton's laws of motion. Dimensions. Force Systems. Elasticity. Equilibrium of particles, rigid bodies and the strings. Bending of thin beams Virtual work, Stability of equilibrium of systems having one degree of freedom. Straight line motion of a particle with emphasis on simple harmonic motion. Motion constants. Kinematics of a particle in plane motion. Motion of a particle in a uniform force-field. Relative motion of two particles. Central orbit motion.

Prerequisite: One and one-half courses in Physics, two full courses in Calculus and a half course in differential equation.

Lectures: 3 hours per week, second term.

Text: The equivalent of *Introduction to Mechanics* by Synge and Griffith.

320 Methods of Mathematical Physics I. Full Course. R.L. Kovacs

Finite dimensional vector spaces. Matrices and determinants. Linear transformations and linear coordinate transformations. Systems of simultaneous linear equations. Eigen value problem and quadratic forms. Introduction to tensor analysis (if time permits).

Prerequisites: One and one-half courses in Physics and two full courses in Calculus.

Lectures: 3 hours per week for two terms.

Text: Hadley, *Linear Algebra*, Addison-Wesley.

324 Elementary Methods of Mathematical Physics. Full Course. R.L. Kovacs

Elementary Partial Differentiation. Functions of Many Variables. Vector Calculus. Differential Equations.

Prerequisites: One full course in Physics and one full course in Calculus.

Lectures: 3 hours per week for two terms.

Text: To be announced.

400 Modern Physics. Full Course.

The origin of the Quantum Theory. Planck's law, Photo-electric effect, Compton effect, Brehmstrahlung. Nuclear Atom and Rutherford Scattering. Spectral lines and Bohr Sommerfeld Model. Wave properties of particles, de Broglia ways. Schrodinger equation, preliminary quantum mechanical formalism and its interpretation. Simple Schrodinger Equation for a free particle, a particle in a three-dimensional box, a barrier potential, a potential well, a one-dimensional harmonic oscillator, the hydrogen atom, The Frank-Hertz Experiment. Atomic structure and spectra, orbital angular momentum, spin and multiplicity: Zeeman Effect, Stern-Gerlach Experiment, L-S coupling, J-J coupling, X-ray spectra. Molecular spectra, rotational and vibrational. Molecules and bonding in solid state. Heitler-London theory of Hydrogen molecule. The Band model of solid state. Electrons in a periodic lattice.

Prerequisites: P. 308, half-course in differential equations. Half course in Advanced Calculus and Vector Analysis.

Lectures: 3 hours per week for two terms.

Lab: 3 hours per week for two terms.

Text: Richtmeyer, Kennard and Cooper, *Introduction to Modern Physics*.

402 Modern Physics. Full Course.

Special relativity, quantum effects, Particle aspects of electromagnetic radiation, wave aspects of material particles, nuclear atom and Bohr theory, elementary quantum mechanics of atoms. X-ray spectra, radioactivity, nuclear structure, accelerators and detectors, nuclear reactions.

Prerequisite: P. 300, P. 324, P. 414.

Lectures: 3 hours per week for two terms.

Lab: 3 hours per week for two terms.

Text: Weidner and Sells, *Elementary Modern Physics*.

403A Modern Physics. Half Course. First Term.

This is the first term of Physics 402.

Prerequisites: One full course in Calculus, one full course in Mechanics and one full course in Electricity and Magnetism.

Lectures: 3 hours per week, first term.

404 Statistical and Thermal Physics. Full Course.

Probability distributions and statistical measures. Statistical description of a system of particles. Thermodynamic laws, basic statistical relations and statistical calculation of thermodynamic quantities. Macro thermal parameters and their measurement with simple applications. Basic methods in statistical mechanics and some simple applications. Equilibrium between phases and between chemical species. Quantum statistics of ideal gases. Magnetism and low temperatures. Elementary kinetic theory of transport processes.

Prerequisites: P. 308, P. 311B, Advanced Calculus.

Lectures: 3 hours per week for two terms.

Text: F. Reif, *Fundamentals of Statistical and Thermal Physics*, McGraw-Hill.

405 Properties of Matter II. Half Course.

Capillarity – Surface tension – Surface films – Kinetic theory of matter – osmotic pressure – Diffusion – Viscosity and viscous flow – Study of the Gaussian theory of errors.

Prerequisites: P. 305, P. 324, P. 407.

Lectures: 3 hours per week, one term.

407 Thermodynamics. Half Course.

Temperature and thermometry. Equations of State: thermodynamic systems, state of a system, intensive and extensive variables, equation of state of an ideal gas, other equations of state, p-v-t surfaces. Work: dependance on path, coefficients of expansion, compressability. First law of thermo-dynamics; implications, internal energy, heat dependance on path, heat capacities, isothermal and adiabatic processes, Joule experiment, Joule Thompson experiment, enthalpy, change of phase: p-v-t surfaces, of real substance, critical constants, corresponding states, heats of transformation. Second law of thermodynamics: implications, various phrasings, carnot cycles, thermodynamic temperature scale, clausius-clapeyron equation, Stefan's law. Entropy: a thermal state variable, reversible and irreversible processes, calculation of changes of entropy, principle of increase of entropy. First and second laws combined: Helmholtz function, Gibbs function, Maxwell equations, Gibbs-Helmholtz equation, thermodynamics of kinetic theory of ideal gases: basic assumptions, equation of state of an ideal gas, Clausius and Van der Waal's equation of state. Maxwell velocity distribution: error function, the mean and r.m.s. velocity, most probable velocity, the equipartition of energy, classical theory of specific heat. Transport phenomena: mean free path, viscosity, conductivity (if time permits).

Prerequisites: P. 324, P.414.

Lectures: 3 hours per week, one term.

Text: Sears, *Introduction to Thermodynamics, Kinetic Theory and Statistical Mechanics*, Addison-Wesley.

408 Electronics. Full Course.

This course treats the following topics:

AC and DC network theory, elementary semi-conductor theory, p-n junctions, DC power supplies and filter network analysis, junction and field effect transistor principles, hybrid models, single and multi-stage amplifiers, high input impedance circuits, differential amplifiers, frequency response of amplifiers, audio oscillators, multivibrators, and pulse circuits, complementary push-pull power amplifiers.

Prerequisites: One full course in Electricity and Magnetism.

Lectures: 3 hours per week for two terms.

Lab: 3 hours per week for two terms.

Text: Millman and Halkias, *Electronic Devices and Circuits*, McGraw-Hill. Brophy, *Basic Electronics for Scientists*, McGraw-Hill.

411A Mechanics. Half Course. First Term.

Kinematics of the motion of a system of particles including rigid bodies, Center of mass, moment of inertia, linear momentum, angular momentum, kinetic energy – Dynamics of a non-rigid system of particles – collision problems – Rocket motion-impact of a stream of particles – Plans motion of a rigid body – The compound pendulum – motion due to impulses – Internal stresses of a rotating body – equations of motion with respect to moving axes introducing coriolis and centrifugal forces – motion of a particle in space; spherical pendulum, a charged particle in an electromagnetic field – Rotation of a body with a fixed point: Eulerian angles, Euler's equations, Poinset ellipsoid, gyroscopic motion, gyrocompass – Introduction to Lagrange's and Hamilton's equations of motion.

Prerequisites: P. 311B, half course in Advanced Calculus and Vector Analysis.

Lectures: 3 hours per week, first term.

Text: The equivalent of *Introduction to Mechanics*, by Synge and Griffith

413B Advanced Mechanics. Half Course. Second Term.

Variational Principles and Lagrange's Equations – Scattering in a central force field – Kinematics of rigid body motion in terms of orthogonal rotations – Eulerian angles. Cayley Klein parameters and Pauli spin matrices – Rigid body motion – Relativistic mechanics – Covariant Langrangian formulations – Hamilton's equations of motion by Legendre transformations and by variational principles of least action-Canonical transformations – Lagrange and Poisson brackets – Liouville theorem – Hamilton-Jacobi theory – small oscillations.

Prerequisites: P. 411A, P.320 and one full course in Advanced Calculus.

Lectures: 3 hours per week, second term.

Text: H. Goldstein, *Classical Mechanics*, Addison Wesley.

414 Mechanics. Full Course.

This treats all the topics covered in Physics 311B and Physics 411A except the Lagrange and Hamilton equations. Applications are to simpler problems.

Prerequisites: One full Physics course and two full courses in Calculus.

Lectures: 3 hours per week for two terms.

Text: The equivalent of *Introduction to Mechanics*, by Synge and Griffith.

420 Methods of Mathematical Physics II. Full Course.

General concepts on analysis. Partial differential equations of physics. Fourier method. Functional spaces and orthonogonal sets. Sturm Liouville problem, Fourier series and Fourier integral. Special functions: Legendre, Bessel.

Prerequisites: P. 320, one full course in Advanced Calculus, half course in differential equations, half course in advanced Calculus and Vector Analysis.

503A Nuclear Physics. Half Course. First Term.

Radioactivity, decay laws. Nuclear transitions and reactions – passage through matter. detection and acceleration of particles. Nuclear structure and models. Neutrons. Introduction to high energy Physics.

Prerequisites: Physics 400.

Lectures: 3 hours per week, first term.

Lab: 3 hours per week, first term.

505B Solid State Physics. Half Course. Second Term.

Crystal structure, reciprocal lattice, specific heat, free electron theory, band theory, semiconductors and insulators.

Prerequisites: P. 400, P. 404 (previously or concurrently).

Lectures: 3 hours per week, second term.

Lab: 3 hours per week, second term.

511A Relativity. Half Course. First Term.

Classical theory of some light experiments. Postulates of the special theory. Lorentz Transformation. Relativistic kinematics. Relativistic mechanics of a particle. Four dimensional formulation of the special theory. Electrodynamics in a vacuum. Introduction to the general theory.

Prerequisites: Physics 413B.

Lectures: 3 hours per week, first term.

Text: Rosser, Butterworth, *An Introduction to the Theory of Relativity*.

512 Electromagnetic Theory. Full Course.

Derivation of the laws of electrostatics and magnostatics from the basic experimental laws, method of images, delta functions, Maxwell's equations, wave solutions in various media, wave guides, solutions of Laplace's equation, Helmholtz equation and wave equation by Green's functions; multipole fields, interaction of charged particles, radiation of moving charges, Abraham-Lorentz theory.

Prerequisites: P. 308, P. 311B and P. 420.

Lectures: 3 hours per week for two terms.

Text: Jackson, *Classical Electrodynamics*, John Wiley.

References: Becker and Sauter, *Electromagnetic fields and interactions*, Blaisdell. Pannofsky and Phillips, *Electricity and Magnetism*, Addison Wesley. Ratygin and Toptygin, *Problems in Electrodynamics*, Academic Press.

514 Quantum Mechanics. Full Course.

Operator formalism and postulates of quantum mechanics. Harmonic Oscillator by algebraic method. Correspondence Principle and Ehrenfest Theorem Angular momentum, Class T. operators. Central forces — Hydrogenic problem: Three-dimension harmonic oscillator, free particle, potential well. Matrix representation and Heisenberg picture, harmonic oscillator. Spin angular momentum, electron-spin recession, paramagnetic resonance. Transformations and representations. Approximation methods, perturbation theories. Interaction with a strong electromagnetic field. Scattering. Identical particles. Hydrogen molecule.

Prerequisites: P. 400 and P. 420.

Lectures: 3 hours per week for two terms.

Text: R.H. Dick and J.P. Wittke, *Introduction to Quantum Mechanics*.

POLITICAL SCIENCE**Department Chairman****R.C. Coyte****Courses leading to a B.A. with a Major in Political Science.**

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Political Science	Political Science	Political Science
Political Science	Political Science	Political Science
Elective	Elective*	Political Science
Elective	Elective	Elective*
Elective	Elective	Elective

A Major in Political Science consists of seven courses in the Department. In the first year a student must include Political Science 300 if he has not completed Political Science 100 (Collegial) or an equivalent course at Loyola or another institution. Five elective courses must be taken in departments other than Political Science. A student's programme will be decided in consultation with the Department.

Courses leading to an Honours B.A. in Political Science.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Political Science	Political Science	Political Science
Political Science	Political Science	Political Science
Political Science	Political Science	Political Science
Elective	Elective*	Elective*
Elective	Elective	Elective

*These electives may have to be taken from a specified list of courses approved by Senate.

I. An Honours in Political Science consists of nine courses in the Department. In the first year a student must include Political Science 300 if he has not completed Political Science 100 (Collegial) or an equivalent course at Loyola or another institution. Five elective courses must be taken in departments other than Political Science.

II. Honours students are required to take three courses in the 2nd and 3rd year from the Honours group listed below:

520 Seminar on Politics of French Canada	M.Danis
524 Seminar on Canadian Federal, Provincial and Municipal Government	E. Griffiths
542 Seminar on Communism in East Asia	K. Oh
544 Seminar on Politics of Eastern Europe	L.Laszlo
(cont'd)	

560 Seminar on Advanced Comparative Government (Western Europe)	H.Habib
570 Seminar on Government and Economic Policy	R.Coyte
590 Seminar on Modern Political Thought	J.Moore

III. In the 3rd Year Honours students are also required to take either Political Science 592 or an additional course in the Honours group shown in II: Political Science 592 (Directed Readings in Political Science)

(1) Comparative Political Systems	H.Habib
(2) The Far East	K.Oh.
(3) Britain or the U.S.A.	R.Coyte
(4) Governments of the European Communist States	L. Laszlo
(5) Political Philosophy	J.Moore
(6) Canadian Politics	M.Danis

IV. An Honours student will be required to maintain a 65% average in all his courses and a minimum of 65% in Political Science courses during his programme and pass a comprehensive oral examination at the end of the 3rd year.

Honours courses are designated by an H. They are open to Political Science Majors and Honours students from other departments with the permission of the Department of Political Science.

Courses leading to a B.A. with joint-major in Economics and Political Science.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Economics 310	Economics 406	Economics 433 or 535
Economics 302 or 321	Political Science	Economics Elective
Political Science Elective	310 or 431A	Political Science 570
Elective	Elective*	Political Science Elective
Elective	Elective	Elective*
	Elective	

* These electives may have to be taken from a specified list of courses approved by Senate.

A joint-major in Economics and Political Science consists of nine courses in both departments. Before entering the programme a student must have completed an introductory course in Economics and Political Science at the CEGEP level.

Explanation of Course Numbers.

Courses in the 300 range are open to Political Science Majors and Honours and students in other departments. Courses in the 400 range are open to Political Science Majors and Honours and students in other departments with the permission of the professor giving the course. Courses in the 500 range are open to Political Science Majors and Honours and to advanced students in other departments with the permission of the professor giving the course.

Course numbers ending with an odd number are half-courses. Course numbers with an "A" are courses given in the first term, courses with a "B" are courses given in the second term.

The fourth year of the old Political Science Programmes will be found on pages 274 f.

300 An Introduction to Political Science. Full Course. R. Coyte

A basic course in the fundamentals and significance of Political Science.
Lectures: 3 hours per week for two terms.

310 International Politics. Full Course. K.Oh

A systematic study of inter-state behaviour both in the periods of peace and war with the methodology of the behavioural approach. It includes analysis of capabilities, means of instruments, and techniques of achieving national objectives.

Prerequisite: Political Science 300 or the approval of the professor.
Lectures: 3 hours per week for two terms.
Texts: Karl W. Deutsch, *The Analysis of International Relations*, Prentice-Hall, Inc. 1968.
Robert L. Pfaltzgraff Jr. (ed.), *Politics and the International System*, J.B. Lippincott Co. 1969.

320 Canadian Government. Full Course.

An institutional and functional analysis of the political process in Canada.
Lectures: 3 hours per week for two terms.
Text: Dawson, *Government of Canada*, University of Toronto Press.

321A American Government and Politics. Half Course. First Term. R.Coyte

Theory and practice of American government. Attention is given to identifying the values and outlining the character of the American people with emphasis on political behaviour and institutions that determine and execute public policy.

- 337 Latin American Government. Half Course.**
(Not offered 1971-72)
An analysis of the historical background and of contemporary political processes.
- 340 The Government and Politics of the Soviet Union. Full Course.** L.Laszlo
Government and Politics of the Soviet Union. Basic theories of Communism: evolution of the Soviet System;
Lectures: 3 hours per week for two terms.
- 351B British Government and Politics. Half Course. Second Term.** R.Coyte
Government and Politics in Britain with particular emphasis on political parties and pressure groups, changing role of the legislature and executive, and the Public Corporations. The role of the Commonwealth today.
Lectures: 3 hours per week, second term.
- 390 Political Philosophy. Full Course.** J.Moore
A study of the works of the most important political philosophers in the ancient and medieval worlds. The principal thinkers discussed in this course will be Plato, Aristotle, Cicero, St. Augustine, St. Thomas Aquinas, and Machiavelli.
Lectures: 3 hours per week for two terms.
- 402 Seminar on the Political Atheism of Marxism-Leninism. Full Course.** R.P.Moroziuk
(This course will also be given as Theology 501)
A brief period of the seminar will be spent on studying the basic tenets of Marxism-Leninism (Historicism, Dialectics, Scientific Atheism, Political Economy and Scientific Socialism). The remainder will focus on examining the role Marxism-Leninism plays in determining communist ideology and political praxis on both the internal (national) and international levels. Also, each student will undertake a research project centered either around the national political scene or the international scene with the purpose of illustrating the determinant role of Marxism-Leninism in each case study.
Texts: *Fundamentals of Marxism-Leninism*, Moscow 1963.
Research: from current periodicals concerned with the Soviet scene.
- 411A An Introduction to International Law I. Half Course. First Term.** H.Habib
International Law, States and the International Community.
Lectures: 3 hours per week, first term.

- 412 International Organization. Full Course.**
(Not offered 1971-72)
A survey and analysis of attempts to institutionalize order and change in the international society. Chief emphasis will be upon the United Nations.
- 413B An Introduction to International Law II. Half Course. Second Term.** H.Habib
Diplomacy, treaties, the Law of War and Peace, Neutrality.
Lectures: 3 hours per week, second term.
- 419A Political Parties, Pressure Groups and Public Opinion. Half Course. First Term.** M.Danis
A comparative analysis of electoral systems, political parties, pressure groups and public opinion in Western Europe and North America with special emphasis on Canada.
Lectures: 1 hour per week, first term.
Seminars: 2 hours per week, first term.
Texts: Duverger, *Political Parties*, J. Wiley. Key, *Politics, Parties and Pressure Groups*. T. Cromwell Thorburn, *Party Politics in Canada*, Prentice-Hall.
- 421B Comparative Federal Systems. Half Course. Second Term.** M.Danis
A comparative analysis of the institutions and problems of the major classical federal systems of government with emphasis on the Canadian Federation.
Prerequisite: With permission of the professor.
Lectures: 3 hours per week, second term.
- 424 An Introduction to Law and the Canadian Constitution. Full Course.**
An introduction to law in general and the Civil Code, in particular, with reference to the Criminal Code, Companies Act, and others. This course will also deal with the Canadian Constitutional System and its major interpretations by the Courts.
Prerequisite: Approval of the department of Political Science.
Lectures: 3 hours per week for two terms.
- 428 Public Administration. Full Course.**
A theoretical study of government management and institutions, based on the Canadian administrative experience and related to Anglo-American comparative practice.
Lectures: 3 hours per week for two terms.

POLITICAL SCIENCE

- 431A The New Europe. Half Course. First Term. L.Laszlo**
Politics and Economics of European Integration. This will include material on the Council of Europe, European Common Market, the European Free Trade Association and the (COMECON) Council for Mutual Economic Assistance.
Lectures: 3 hours per week, first term.
- 433B Catholic Social and Political Thought. Half Course. Second Term. L.Laszlo**
A study of contemporary Catholic social and political philosophy and political activity, as exemplified by the French MRP, the Dutch, German, Austrian, Italian Christian Democratic movements and the Spanish "Opus Dei".
Lectures: 3 hours per week, second term.
- 440 Contemporary Politics of the Far East. Full Course.**
(Not offered 1971-72).
Analysis of the political developments of China and Japan since the nineteenth century with special emphasis on the traditional institutions and social structures their transformation brought about by the impact of the West; the government and politics of China and Japan and the rise of Communism.
- 441A Contemporary Politics of China. Half Course. First Term. K.Oh.**
An analysis of the political development of China since the nineteenth century with special emphasis on the Western impact, nationalism and communist movement; and present government and politics.
Lectures: 3 hours per week, first term.
Texts: George M. Beckmann, *The Modernization of China and Japan*, New York: Harper and Row, 1962.
Allen S. Whiting, *Communist China's Political System*, New Jersey: Prentice-Hall, 1967.
- 443B Contemporary Politics of Japan. Half Course. Second Term. K.Oh.**
An analysis of the political development of Japan since nineteenth century with special emphasis on the Western impact, ultra-nationalism and militarism, and present government and politics.
Lectures: 3 hours per week, second term.
Texts: George M. Beckmann, *The Modernization of China and Japan*, New York: Harper and Row, 1962.
Robert E. Ward, *Japan's Political System*, New Jersey: Prentice-Hall, 1967.

POLITICAL SCIENCE

- 446 Comparative Government. Full Course. H.Habib**
A survey of contemporary political systems, forces, and problems in Western Europe with special emphasis on France, Germany, and the United Kingdom.
Prerequisite: Political Science 300 or equivalent.
Lectures: 3 hours per week for two terms.
- 450 African Government and Politics. Full Course. F. Kunz**
Colonialism, imperialism and the rise of nationalism; government and politics of the independent African states.
Lectures: 3 hours per week for two terms.
- 455A The Middle East in World Politics. Half Course. First Term. H.Habib**
The Arab-Turkish-Islamic Heritage: Nationalism, Zionism and Contemporary International Problems.
Lectures: 3 hours per week, first term.
- 457B Mid-East Political Systems. Half Course. Second Term. H.Habib**
A comparative study of a selected number of Mid-East governments.
Lectures: 3 hours per week, second term.
- 480 Behavioural Theory and Approaches of Political Science. Full Course.**
A systematic study of modern theories of political behaviour with emphasis on behavioural methodology and survey techniques. It includes an introduction to behavioural approaches, analysis of system theories and attempts at survey research.
Prerequisite: Political Science 300, or approval of department.
Lectures: 3 hours per week for two terms.
- 490 Modern Political Philosophy. Full Course. J.Moore**
A study of the most important political thinkers of the modern world, from the Reformation to the end of the nineteenth century.
Lectures: 3 hours per week for two terms.
- 520 Seminar on Politics of French Canada. Full Course. M.Danis**
A study of the constitutional and political institution in Quebec. A survey of French Canadian political thought from L'Abbé Groulx to Pierre E. Trudeau. An analysis of the issues and problems in contemporary Quebec.
Prerequisite: With permission of the professor.

POLITICAL SCIENCE

522	Seminar on Canadian Foreign Policy. Full Course. An analysis of the development and the present problems of Canadian foreign and defense policies.	D. Vince, R.P. Duder
524	Seminar on Canadian Federal, Provincial, and Municipal Relations. Full Course. Governments of Cities, Towns, and Countries; Relations between Federal, Provincial, and Local Governments.	E.Griffiths.
542	Seminar on Communism in East Asia. Full Course. An intensive analysis of communism as it relates to the development of political ideas, institutions, and domestic and foreign policies of East Asian countries. Some of the topics to be examined are: (1) ideological factors, (2) socio-political basis, (3) institutional organizations, (4) political leaderships, (5) tactics and strategies, and (6) communist movement of non-communist party-states.	K. Oh
544	Seminar on the Politics of Eastern Europe. Full Course. A study of the constitutional, political, and administrative systems of the East European states (East Germany, Poland, Czechoslovakia, Hungary, Roumania, Yugoslavia, Bulgaria, Albania)	L.Laszlo
560	Seminar on Advanced Comparative Government (Western Europe). Full Course. A study of comparative political systems of Western Europe.	H.Habib
570	Seminar on Government and Economic Policy. Full Course. The role of government in the economic life of different nations: the relation of economic and political power; the changing balance of public and private power in political systems. Emphasis will be on Canadian governmental and economic relations.	R.Coyte
590	Seminar on Modern Political Thought. Full Course. The emergence of political science as a discipline in the past hundred years. A study of the various modes of political understanding in this period giving particular attention to the ideological, sociological, psychological, legalistic, economic, philosophical and contemporary behavioural approaches.	J.Moore

POLITICAL SCIENCE

592	Directed Readings in Political Science. Full Course. (1) Comparative Political Systems (2) Far East (3) Britain or the U.S.A. (4) Governments of the European Communist States (5) Political Philosophy (6) Canadian Politics	Staff H.Habib K.Oh R.Coyte L.Laszlo J.Moore M. Danis
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PSYCHOLOGY

Department Chairman

To be announced

Courses leading to B.A. with a Major in Psychology.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Psychology 300	Psychology 400	Psychology*
Psychology 301	Psychology*	Psychology*
Elective**	Elective**	Elective**
Elective**	Elective**	Elective**
Elective**	Elective***	Elective***

Courses leading to B. Sc. with a Major in Psychology.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Psychology 300	Psychology 400	Psychology*
Psychology 301	Psychology*	Psychology*
Chemistry 326	Science Elective****	Science Elective****
Biology 320	Elective**	Elective**
Elective**	Elective***	Elective***

Students entering this programme must have successfully completed the Science programme at the CEGEP level. Minimum requirements would therefore, be two full courses in Mathematics, one full course in Chemistry and Physics and one half course in Biology. Full Course= two semesters.

- * Suggested distribution of three remaining psychology courses to complete Major. Other combinations are possible.
- ** Students may choose their electives from Accountancy, African Studies, Biology, Business Administration, Chemistry, Classics, Communication Arts, Computer Science, Economics, English, French Studies, Geology, History, Interdisciplinary Studies, Mathematics, Modern Languages, Philosophy, Physics, Political Science, Psychology, Sociology, Theological Studies. In choosing their electives, students should consult as to prerequisites with the Departments concerned.
- *** These electives may have to be taken from a specified list of courses approved by Senate.
- **** Science electives must be chosen from one of the following Departments: Physics, Chemistry, Biology, Geology, Mathematics. Note that this must be done in consultation with the Science Faculty; students should be aware of prerequisite requirements.

The fourth year of the old Psychology Programmes will be found on pages 274 f.

The Department of Psychology offers a Major programme leading to both a B.A. and a B. Sc. The curriculum is designed to provide a general education and to give adequate preparation for graduate studies in Psychology.

A Major in Psychology consists of a minimum of six courses in the subject, including 300 and 301 in the first year and 400 in the second year. These courses will provide the student with not only the practical experience in psychological research of all types, but also an understanding of the philosophical and scientific origins of Psychology and of the epistemological basis of scientific research methodologies.

The Department offers at the third year level courses which can be adapted to a student's specific needs. Acceptance to these courses requires special consideration of the student's interest and ability to complete the course. Students wishing to take Psychology 501 should prepare, before the beginning of the fall term, a list of books that have relevance to the problem area undertaken for study by the student. Students should register for Psychology 502 at the end of their second year. Acceptance into the course will only be finalized after submission of a definite research proposal not later than three weeks after beginning of the fall term.

Courses 401- 411 are available to students in all three years.

300 Research Methods I. Full Course. J. Campbell, R. Lambert

The first semester of this course will introduce the student to some of the equipment and procedures used in a Psychology Laboratory, to collect and describe data about behaviour. The second semester will introduce the student to statistical theory and techniques, including: the theory of distribution, principles of hypotheses testing, techniques for testing hypotheses based on "central limit theorem", techniques for testing hypotheses based on the assumption of population "normality".

Lectures: 3 hours per week for two terms.
Lab: 3 hours per week, first term.

301 Historical Approach to Systematic Psychology. Full Course. H. Bauer, E. Mouledoux

This is a comprehensive course which is intended to give an appreciation of how and why Psychology developed as it did in relation to historical-cultural milieux, major trends in intellectual history, contending philosophical assumptions and technical and methodological developments.

Lectures: 3 hours per week for two terms.

- 400 Research Methods II. Full Course.** **R. Lambert**
 The first semester of this course will further the student skills in the employment of statistics for psychological research. 'Likelihood ratio', 'chi square' and 'correlation' methods of specifying and testing behavioural hypotheses will be emphasized. During the second semester the student will gain practical experience in laboratory with the application of these methods to the detailed study of behaviour.
 Lectures: 3 hours per week for two terms.
 Lab: 3 hours per week, second term.
- 401 Developmental Psychology. Full Course.** **E. Mouledoux**
 A study of physical, cognitive, emotional and social development from conception to old age, with emphasis on childhood and adolescence and on normal development, with some study of age-related deviant patterns. Students will be required to carry out observations of children in a variety of natural settings.
 Lectures: 3 hours per week for two terms.
- 402 Social Psychology. Full Course.**
 An introduction to concepts and research in some of the topics of social psychology. This course will concentrate upon the study of interpersonal dynamics, deviant behaviour, attitude development and change, and inter-personal conflict and aggression. The psychological study of social issues such as racism, bilingualism and non-medical drug use will also be examined.
 Lectures: 3 hours per week for two terms.
- 403 Personality: Introductory Explorations. Full Course.** **P. Babarik**
 The organization, functioning and development of personality will be elaborated according to dynamic personality theory as developed by Freud and contemporary personologists. Evidence from experimental and field studies which are relevant to personality will be related to the basic theoretical development.
 Lectures and Seminars: 3 hours per week for two terms.
- 404 Motivation. Full Course.**
 A study of determinants (neural, hormonal, experiential) of activity. The variability of behaviour (e.g. eating behaviour, sexual behaviour, exploration, play), is discussed in terms of homeostasis, pleasure, arousal, disparity, etc.
 Lectures: 3 hours per week for two terms.

- 405 Sensation and Perception. Full Course.** **R. Lambert**
 This course will give detailed attention to the way the eyes and ears of a human being receive information about the physical environment and to the ways in which the human being extracts that information from his eyes and ears to gain either a conscious or a behavioural knowledge of the physical environment. The major emphasis of the course is functional, not an anatomical or neurological understanding of the sensory-perceptual human activity but some biological concepts will be employed.
 Lectures: 3 hours per week for two terms.
- 406 Learning. Full Course.** **H. Ladd**
 The course is a detailed examination of behaviour in terms of the principles of conditioning and learning. The course material is approached principally from an experimental, empirical point of view.
 Lectures: 3 hours per week for two terms.
 Lab: To be scheduled during regular classes.
- 407 Animal Behaviour. Full Course.** **H. Bauer**
 The study of animal behaviour, its description, function and causes, from a comparative bio-psychological point of view.
 Lectures: 3 hours per week for two terms.
- 408 Human Information Processing. Full Course.** **J. Campbell**
 Examines the way in which sensory input is transformed, recognized, stored, recovered and used. The course looks at pattern and speech recognition, memory, and attention, decision making and reasoning in the context of recent experimental and theoretical work.
- 409 Community Psychology. Full Course.** **P. Babarik**
 This course will relate psychology to the problems of man-in-society and consider basic areas of psychological knowledge as they bear upon the behaviour of man-in-institutions; that is the strategies that man uses to create a habitat which in turn determines his development. The contributions of psychology to community leadership in the search for new and better personal, social, cultural and ecological arrangements will be considered as they relate to such institutions as industry, education and the health, welfare and political structures.
 Lectures and Seminars: 3 hours per week for two terms.

- 410

Physiological Psychology. Full Course.

A study of the physiological basis of behaviour: sensory systems, response mechanism, nervous system.

Lectures: 3 hours per week for two terms.
Lab: To be scheduled during regular classes.

V. Maheux
- 411

History of Psychology. Full Course.

A survey of the historical antecedants of modern theoretical and applied psychologies, with application of the historical perspective to understanding some current theories, methods, issues and trends within the discipline.

Lectures: 3 hours per week for two terms.

E. Mouledoux
- 500

Contemporary Issues in Psychology. Full Course.

This course consists of weekly seminars devoted to an "In Depth" study of contemporary psychological literature and conceived to afford the advanced undergraduate student a knowledge of topical and methodological issues currently under active discussion in psychology.

Seminars: 3 hours per week for two terms.

Staff
- 501

Directed Reading Course. Full Course.

A student or group of students in collaboration with the instructor will define a reading list in an attempt to study an area in Psychology from not only a psychological point of view, but from relevant sources that lie outside the discipline of Psychology. It is hoped that this course will bridge the learning gap between the many interrelated disciplines and shed new meaning on problems that have been studied in one context only.

Staff
- 502

Advanced Experimental Psychology. Full Course.

This course is designed for advanced, third year students, with the major emphasis on the execution of a major research project in the student's particular area of interest.

Attendance at scheduled seminars is mandatory.

Seminars: 3 hours per week for two terms.
Lab: To be scheduled.

Staff

- For students completing B.A. and B.Sc. under former 4 year programme.**

The following is a required course in 1971-72 for those who were unable to take it in their third year.
- 305

Research Methods. Full Course.

The first half of this course is designed to introduce a limited number of basic statistical concepts and techniques to students in Psychology. The second half of the course is concerned with experimental methodology; i.e. design and analysis of experiments. Students are required to design, conduct, analyze and report on a number of experiments.

Lectures: 3 hours per week for two terms.
Lab: 3 hours per week for two terms.

The following courses will be available as electives under the old numbering system. For information on the course, please refer to course number in brackets which corresponds to the numbers of the course description above.

301	Developmental	(401)
302	Social Psychology	(402)
303	Personality	(403)
304	Motivation	(404)
306	Learning	(406)
307	Animal Behaviour	(407)
308	Perception	(405)
309	Community Psychology	(409)
310	Human Information Processing	(408)
401	Physiological Psychology	(410)
402	Advanced Experimental	(502)
403	History of Psychology	(411)
404	Contemporary Issues	(500)

V. Maheux, H. Ladd.

SOCIOLOGY

Department Chairman

J.F. Tascone

Courses leading to an Honours B.A. in Sociology.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Sociology (3) Electives (2)	Sociology (3) Electives* (2)	Sociology (3) Electives* (2)
University I: Required —	301 and half course in Social Theory (Sociology 100 may be offered in lieu of Sociology 301)	
	— 300 (Social Psychology)	
Elective —	One credit at 300 level (2 half courses)	
University II: Required —	400 (Methods)	
	450 (Statistics)	
Elective —	one course at 400 level (2 half courses)	
University III: Required —	500 (Contemporary Sociological Theory)	
	550 (Honours Essay)	
Elective —	two half courses at 500 level (one may be taken at other levels or one full course at 500 level or higher).	
Summation:	1st year — 3 credits (2 required)	
	2nd year — 3 credits (2 required)	
	3rd year — 3 credits (2 required)	

Courses leading to a B.A. with a Major in Sociology.

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Sociology (2) Electives (3)	Sociology (2) Electives* (3)	Sociology (3) Electives* (2)
University I: Required —	301 and half course in Social Theory (Sociology 100 may be offered in lieu of Sociology 301)	
Elective —	Two half courses at 300 level or Sociology 300.	
University II: Required —	Half course in Research Methods and Social Statistics	
Elective —	Two half courses at 400 level.	
University III: Required —	Three half courses at 500 level or higher	
Elective —	Three half courses at any level.	
Summation:	1st year — 2 credits (1 required)	
	2nd year — 2 credits (1 required)	
	3rd year — 3 credits (Electives in Sociology)	

N.B. Majors would be required to study THEORY, METHODS, STATISTICS as generally pertinent in the acquisition of minimum competency in the basic ideas, skills and techniques of sociology.

* One of these electives in both University II and III may have to be taken from a specified list of course approved by Senate.

The fourth year of the old Sociology Programmes will be found on pages 274 f.

+ In general, Sociology 301 (Systematic Sociology) is a prerequisite for registration in all other courses in Sociology. Also those students who satisfy the prerequisites are encouraged to make their choice from the series appropriate to their university standing. For example, 300-399 for first year university students; 400-499 for second year university students; 500 or higher for students who are in their last year of university. However, if a student has completed the Sociology 100 (Introductory Sociology) in the collegial programme at Loyola or an equivalent course at another institution, the Sociology 301 prerequisite will be waived. In certain cases, such as a third year political science student who wants to register in Political Sociology or a third year English student who wants to take the Images of Society course, but neither of these can offer the collegial Sociology 100 or the university Sociology 301, the prerequisite will also be waived. In other words, the Department of Sociology claims the prerogative of admitting students to one or more of its several courses even though the formal prerequisites are not being met.

Finally, while first year university students are pretty much limited, to the 300-399 series of courses, the second year university student may choose from the 400-499 series plus the 300-399 series. No similar limitations apply for students who are in their last year of university provided they can offer the prerequisites or secure departmental approval.

UNIVERSITY I COURSES.

300

Social Psychology. Full Course.

R. Harman, T. McPhail,
A. Parr, J. Tascone.

A survey of the earliest social psychologists such as Comte, Tarde, LeBon and Mead and others form the basis of this course. After an examination of the relationship of this newest behavioural science to Sociology, Psychology and Anthropology, attention will be focused upon learning, perception, motivation, attitude formation and change. The last half of the year will be devoted to a study of roles, the socialization process, communication and persuasion.

Required of ALL Honours students in Sociology and strongly recommended to Majors particularly those who may apply for Honours status before the second university year.

Prerequisites: Registration in Sociology 301 during the first term of the first year OR Departmental approval.

Lectures: 3 hours per week for two terms.

- 301 Systematic Sociology. Half Course. First term. Staff**
 An examination of the structures and processes of society using the basic concepts of scientific sociology. This course will also study the method, theories and goals of the contemporary scientific and theoretical approaches to an understanding of social behaviour.
 + Required of ALL first year university students who plan to major or honour in sociology.
 Lectures: 3 hours per week, first term.
- 302 Socialization. Half Course. Second Term. H. Horwich**
 An examination of the processes by which the individual becomes a functioning member of society. Biological, psychological, sociological, and anthropological studies of child-rearing practices are considered, as well as adult socialization and the processes associated with learning and performing within group contexts such as the family, the factory, the prison, the hospital, etc. Emphasis is placed on the relation of social structure to role acquisition and performance.
 Lectures: 3 hours per week, second term.
- 303 Canadian Society. Half Course. First Term. J. Tarlo, T. McPhail**
 An exploration of the structure and dynamics of Canada with special emphasis upon its socio-economic class system. Using age, race, religion, ethnicity and sex as variables, comparisons will be made between Canada and other Western societies, particularly that of the United States. Inference will be limited to those with empirically rooted validity and reliability.
 Lectures: 3 hours per week, first term.
- 304 Quebec Society. Half Course. Second Term. To be appointed**
 The course attempts to trace the unique trends within the Francophone culture as it has grown from the rebellions of 1837 to its present context. Particular emphasis will be placed on the BNA Act, federal-provincial relations, the role of the Catholic Church, the impact of American industry, and the social, political and educational changes of the 1960's. Materials from the Dominion Bureau of Statistics and articles by French Canadian Sociologists will be utilized in addition to the text assigned to the course.
 Lectures: 3 hours per week, second term.

- 305 Criminology and Delinquency. Half Course. First Term. H. Horwich**
 Criminal and delinquent behaviour are analysed from various approaches. Problems in defining crime and the criminal are discussed. The etiology of crime and criminal typologies are considered in terms of their implications for programmes of crime prevention and the treatment of offenders. Special problems of the youthful offender are studied. The structure and process of criminal justice administration are considered.
 Lectures: 3 hours per week, first term.
- 306 Social Deviance. Half Course. Second Term. H. Horwich, R. Tiller**
 An examination of deviations from social norms which encounter social forms of disapproval and to which concepts and theories derived from contemporary scientific sociology and social psychology may be applied.
 Lectures: 3 hours per week, second term.
- 307 Introduction to the Study of Poverty. Half Course. First Term. M. Arguelles-Canive, J. Tarlo**
 Twentieth Century North American poverty is seen in terms of inequality. An examination of inequalities in income distribution, assets, basic services, education and social mobility, political position and status and self-respect among different groups in society. The emergence and situation of the "new poor" in Canada and the United States and selected contrasts elsewhere. Theories of inequality reduction underlying contemporary social and economic policies are analysed.
 Lectures: 3 hours per week, first term.
- 308 Advanced Poverty Workshop. Half Course. Second Term. M. Arguelles-Canive**
 Establishing the extensiveness of Canadian poverty. A critique of major public and private institutions, counter-institutions and alternative programmes providing assistance to the "poor". Field work experience as participant-observer in selected community action programmes in the Montreal area. (Limit of 25).
 Prerequisites: Students who want to enroll in the advanced section must meet one of the following requirements:
 a. successful completion of the introductory section (Sociology 307).
 b. permission of the instructor.
 Lectures: 3 hours per week, second term.

311 Case Studies in Dominant Minority Relations. Half Course. First Term.
M. Arguelles-Canive

A consideration of patterns of adjustment following Interethnic contact, including a comparative analysis of the traditional, social and cultural structures of Canada, the United States, Union of South Africa, Brazil, Mexico and Cuba. Special attention will be given to empirical studies of racial conflicts, discriminatory practices and social consequence of marginality.

Lectures: 3 hours per week, first term.

312 Race and Ethnic Relations. Half Course. Second Term.
M. Arguelles-Canive, J. Tarlo

A study of interethnic contact with particular reference to concepts such as interethnic conflict, ethnic stratification, pluralism, assimilation, acculturation, and emigration. Major theories of prejudice and discrimination and the social significance of the concepts of race and ethnicity will be examined.

Lectures: 3 hours per week, second term.

399 Introduction to Social Theory. Half Course. Offered both terms.
**G. Dewey, S. Hlophe,
H. Horwich, J. Tascone**

Examination of the origins of Sociology in the social and political context of nineteenth century European thought. Consideration of early attempts to construct a scientific theory of society with respect to the ideological climate of nineteenth century European society. Main focus on the works of Comte, Marx, Durkheim, Weber and Freud. Reading will include both primary sources and critical commentaries.

Required of ALL MAJOR and HONOURS students in Sociology.

Lectures: 3 hours per week, first or second term.

UNIVERSITY II COURSES

400 Social Research Methodology. Full Course.
**R. Harman,
T. McPhail, J. Tascone**

A study of the problems and procedures in sociological research. Special emphasis is upon the conceptualization process, hypothesis formation and testing and of the role of research to theory. Data collection instruments and devices, including those which involve scaling and other forms of quantification of sociological variables and attributes will be examined.

Required of ALL HONOURS students in Sociology.

Lectures: 3 hours per week for two terms.

450 Sociological Statistics. Full Course.
**T. McPhail,
H. Horwich, J. Tascone.**

This course will study sample data descriptions and summarizations (means, medians, standard deviations, etc.) in the beginning. The remainder of the course is directed to elementary probability theory and of its application to statistical inference and sampling. Parametric and non-parametric tests of significance and a brief introduction to correlation analysis and analysis of variance constitute the remaining areas of study.

Required of ALL HONOURS students in Sociology.

Lectures: 3 hours per week for two terms.

401 Mass Communication. Half Course. First Term.
T. McPhail

The focus of this course will be on the nature of communication as a social process, the relative influence and effect of person-to-person and mass media-to-person communication in relation to attitude formation and change, behaviour, values and society in general. Particular emphasis is placed on the capacity of mass media to generate social action under varying social conditions. Recent empirical studies are examined.

Lectures: 3 hours per week, first term.

402 Collective Behaviour. Half Course. Second Term.
T. McPhail, A. Parr

Analysis of modes of collective behaviour (fads, fashions, crazes, mobs, riots, social movements and publics) within a sociological-psychological framework. The origins and dynamics, internal and external, of social action and pressure groups are discussed. Mass communications, in terms of form and content, are studied as factors in the various forms of collective behaviour. The implications of mass leisure with population qualities such as age, sex, racial and religious factors in urban centers are appraised. Special attention will be given to community reaction to natural and technologically rooted disasters.

Lectures: 3 hours per week, second term.

403 The Sociology of Urban Regions. Half Course. First Term.
**M. Argeulles-Canive,
H. Horwich, J. Tascone**

A study of the process of urbanization as a world phenomenon. Analyses of urban ecology, urban social organization and structures, urban "personalities", leisure and human relations in cities form the principal areas of study in this course. City planning and redevelopment programmes are critically examined.

Lectures: 3 hours per week, first term.

- 404 Population and Demography. Half Course. Second Term. G. Dewey, H. Horwich**
 An examination of present and future population densities, growth and composition and of factors related to population or demographic changes. Special attention is directed in the last half of the term to the "population explosion" as a social problem.
 Lectures: 3 hours per week, second term.
- 405 Marriage. Half Course. First Term. J. Tascone**
 An introduction to the sociology of the family using a development framework and beginning with personality formation, pre-dating, dating, mating and courtship and ending with engagement and wedding. Marital prediction and adjustment tests and studies are examined. Problems of the contemporary marriage in the light of rapid social change in the past and present are discussed.
 Lectures: 3 hours per week, first term.
- 406 The Family. Half Course. Second Term. J. Tascone**
 An analysis of the family as a basic social institution within the structural-functional framework. Patterns of interaction between family members and between the family and other social institutions are studied. Sources of strain and tension in those relationships and the devices for the release of tension are discussed.
 Lectures: 3 hours per week, second term.
- 407 Social Stratification. Half Course. First Term. G. Dewey, J. Tarlo**
 An examination of vertical and horizontal divisions within primitive and modern societies drawing from the classic studies of social class systems completed by Sociologists and Anthropologists.
 Lectures: 3 hours per week, first term.
- 408 Sociology of Religion. Half Course. Second Term. G. Dewey**
 An exploration of the reciprocal influences of religion and religious behaviour on the one hand, and of culture and society on the other within a symbolic interaction framework. A study of the social correlates of approved and disapproved religious actions receives special attention.
 Lectures: 3 hours per week, second term.

- 411 Sociology of Developing Countries. Half Course. First Term. S. Holphe**
 An exploration of the ramifications of modernization upon the institutional structures of developing nations. The organizing principle of the course is from the perspective of social change and the following dimensions of modernization will be emphasized: theoretical approaches to social change, evolution, Marxism, motivation, structural differentiation, economic development, diffusion and urbanization; also, aspects of secondary modernization will be studied, e.g. structural dualism, power and social protest and revolution. The class will be small in size; the emphasis will be on student participation.
 Lectures: 3 hours per week, first term.
- 412 Sociology of Modern Africa. Half Course. Second Term. S. Holphe**
 This course will deal with contemporary African social institutions and their impact on modern African society. Emphasis will be laid on problems of migration, industrialization, and the emergence of a new "middle class". The purpose of the course is to examine the extent to which sociological theory and nonconceptual frameworks apply on a non-western society.
 Lectures: 3 hours per week, second term.
- 413 Small Group Interaction. Half Course. First Term. T. McPhail**
 An introduction to structures and processes of the internal dynamics of small groups and their relationship to the individual and larger social systems. On the basis of field and laboratory research, the impact of small groups will be examined with emphasis on cohesion, norms, leadership, communications and participation.
 Prerequisite: Sociology 301+
 Lectures: 3 hours per week, first term.
- 414 Industrial Sociology. Half Course. Second Term. T. McPhail, J. Tascone**
 The formal and informal systems operating within large scale rational structures and voluntary associations are objectively analyzed and appraised. Patterned interaction and functional configurations between individuals within the organization or association and between organizations and other associations are examined; particularly the implications of the super-ordinate-subordinate relationship, leadership, morale and productivity; organizational conflict and change.
 Lectures: 3 hours per week, second term.

497 Statistics. Half Course. First Term. J. Tascone, T. McPhail

An introduction to the basic techniques necessary for understanding and applying elementary statistics in sociological analysis. Consideration of sample data descriptions and methods of summarization (means, median, standard deviations, etc.). Preliminary attention to elementary probability theory and its application to statistical inference and sampling.

Required of ALL MAJORS in Sociology.

Lectures: 3 hours per week, first term.

498 Methods in Social Research. Half Course. T. McPhail, J. Tascone

A general survey of the problems involved in social research with particular attention to the relationship between theory and research in the development of modern social analysis. Some attention will be given to the logic of empirical research with special reference to the process of conceptualization and the formulation of hypothesis. Consideration of basic techniques of data collection analysis and interpretation is included.

Required of ALL MAJORS in Sociology.

Lectures: 3 hours per week, second term.

UNIVERSITY III COURSES.

500 Contemporary Sociological Theory. Full Course. G. Dewey, J. Tascone

Early in the course an historical survey of the social thought from Comte to Parsons is undertaken. Thereafter, a critical analysis of the competing theoretical systems in Sociology will be undertaken. A detailed examination of the symbolic interactionist and of the structure-function positions completes the subject matter of this course.

Required of ALL HONOURS students in Sociology.

Lectures: 3 hours per week for two terms.

510 Contemporary Social Issues for Non-Majors. Full Course. S. Hlophe, J. Tarlo and Staff

A terminal course for 3rd and 4th year students who want a general introduction to Sociology. This course can *not* be used as a prerequisite for any other Sociology course and is not recommended for students majoring in other social sciences. It will include such topics as the Sociology of Encounter, Cybernation and Dehumanization, Student Protest, Eco-Catastrophe, Canadian Racism, Canadian Nationalism and American Control, and attempts to find alternatives.

Lectures: 3 hours per week for two terms.

550 Honours Essay. Full Course. G. Dewey and Staff

This course affords the student the opportunity for independent research of a specific problem in Sociology which he has selected. During the course of the year, the student will devote his time to designing a research instrument, collecting data, and analysis. He will be expected to write up his findings in thesis form by the end of the year.

Required of ALL HONOURS students in Sociology.

Prerequisite: Sociology 300 (Social Research Methodology) Sociology 350 (Sociological Statistics) and registration in Sociology 400 (Contemporary Sociological Theory).

Lectures: 3 hours per week for two terms.

600 Social and Cultural Anthropology. Full Course. S. Hlophe, H. Horwich

A presentation of the theories concerning the origin of man and his cultures opens this course. Also studied will be the dynamic aspects of culture with special attention directed to the processes of invention, diffusion, adaptation and integration as factors in social and cultural change. Cross-cultural studies, particularly those documented in the Human Relations Area Files, constitute the foundation of this subject area.

Prerequisites: Second or Third year status in Arts and approval of the Department of Sociology.

Lectures: 3 hours per week for two terms.

700 Introduction to Social Work. Full Course. Z. Bryniawsky

This course attempts to provide the student who is giving consideration to Social Work as a career an opportunity to finalize a decision by examining the nature and scope of this profession, its history and methods, and the basic elements of the casework process, namely, the study, diagnosis and treatment procedures. Also examined will be the role of community resources in the casework approach.

(This course is not acceptable as fulfilling any of the requirements for a Major or Honours degree in Sociology but may be undertaken as an elective (with credit) by students who have satisfactorily completed the first two years of study in Sociology, Psychology, Political Science, History or Economics.)

Lectures: 3 hours per week for two terms.

501 Social Change. Half Course. First Term.

**S. Hlophe,
G. Dewey, H. Horwich**

Social change is distinguished from social dynamics early in the term. The major substantive changes of the past two centuries are analyzed as are the theories which attempt to explain them. Methods and findings of recent studies of change are critically examined as are programmes of planned change and social engineering.

Lectures: 3 hours per week, first term.

502 Political Sociology. Half Course. Second Term.

T. McPhail

Sociological and social psychological determinants of political power, political parties, voting behaviour and socio-political movements are analyzed objectively and critically. Leadership and the cycle of leadership are studied within a social-psychological framework.

Lectures: 3 hours per week, second term.

503 Images of Society. Half Course. First Term.

**G. Dewey,
R. Harman, J. Tarlo**

Use of perspectives developed by the sociology of knowledge in the analysis of the relationship between objective social structures and subjectively held conceptions of society. Particular emphasis on the social construction of plausible interpretations of selected aspects of contemporary society (e.g. racism, violence, imperialism etc.). Considerable use will be made of literary sources and essays of social criticism as forms of sociological analysis.

Lectures: 3 hours per week, first term.

504 Problems in Sociology — Seminar. Half Course. Second Term. J. Tascone and Staff

A discussion of the conceptual, methodological, theoretical and ideological problems confronting contemporary Sociology and Sociologists. Some consideration is given to Sociology as an enterprise in the academic and non-academic spheres of modern complex and rapidly changing societies.

Lectures: 3 hours per week, second term.

505 Interpersonal Relations. Half Course. First Term.

M. Arguelles-Canive, R. Harman

An analysis of the relationship between the individual personality and the group. Consideration of the contributions of the traditional sources of theory on interpersonal relations. Emphasis on the forces of integration and conflict in an interpersonal context with particular attention to the methods of conflict resolution as developed in contemporary techniques of group dynamics therapy.

Lectures: 3 hours per week, first term.

506 The Sociology of Women. Half Course. Second Term.

**M. Arguelles-Canive,
J. Tarlo, J. Tascone.**

An analysis of women's roles in major North American societal institutions — marriage, the family, the professions, the church, the schools, industry and government. A section will be devoted to a consideration of problems arising from sexism, revolutions, aging, abortion and birth control, lesbianism and prostitution. Special emphasis will be made on the examination of the position of women in other social systems.

Lectures: 3 hours per week, second term.

507 Occupations and Professions. Half Course. First Term.

T. McPhail, J. Tascone

This course undertakes an analysis of the internal and external relationships of occupations and professions as social institutions with some difference in emphasis each term. Law, medicine, religion and teaching are examined as social systems, with their particular structures, purposes, norms and functions. The relationships of these occupations and professions to the social and economic structure of society will be studied as well. The process of professionalization is examined as is the socialization of the beginning worker and professional into the informal system and sub-culture respectively.

Lectures: 3 hours per week, first term.

508 The Sociology of Education. Half Course. Second Term.

**M. Arguelles-Canive,
T. McPhail, J. Tascone**

An analysis of the social relationships emerging within a formal educational system. Special emphasis will be upon teacher-student patterns in the class-room, teacher-administrator patterns within the school, plus teacher-teacher and student-student relationships within the informal network of a school. Teaching as a profession and the various subcultures of the student population are also examined.

Lectures: 3 hours per week, second term.

511 Sociology of the Future. Half Course. First Term.

T. McPhail, R. Tiller

This course will deal with the impact of technological change on individuals and institutions in modernized societies. The contents of the course will center around innovations, the aspects of change, the role of change agents in society, as well as various organizations, for example, Hudson Institute, Rand Corporation, SRI and the Institute for the Study of the Future. Essentially the course will deal with society ten to twenty years hence on the basis of available data and authoritative projections.

Lectures: 3 hours per week, first term.

512 Technology and Society. Half Course. Second Term. T. McPhail, R. Tiller
A survey of current approaches to the study of technology in its social context and of its long and short range implications with particular reference to selected "social problem" topics such as unemployment, pollution, war and other phenomena receiving political and scientific attention. The reciprocal influences of technology upon the social base from which it emerges will also be analyzed.
Lectures: 3 hours per week, second term.

THEOLOGICAL STUDIES

Department Chairman G.O'Brien, S.J.

Courses leading to the Honours B.A. in Theology

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Theology	Theology	Theology
Theology	Theology	Theology
Theology	Theology	Theology
Elective	Elective	Elective
Elective	Elective*	Elective*

Courses leading to a B.A. with a Major in Theology

UNIVERSITY I	UNIVERSITY II	UNIVERSITY III
Theology	Theology	Theology
Theology	Theology	Theology
Elective	Philosophy	Elective
Elective	Elective	Elective
Elective	Elective*	Elective*

*These electives may have to be taken from a specified list of courses approved by Senate.

Honours, Majors and other specialized students will choose their courses in consultation with the Department Chairman during the first week of the academic year.

The tentative offerings of courses for 1972-73 and 1973-74 of the three-year University programme are available upon request from the Department of Theological Studies.

The fourth year of the old Theological Studies Programme will be found on pages 274 f.

Following Loyola's historical tradition, the Department of Theological Studies sees its rôle in preparing all students to face the religious situation they confront at university and in their professional career. Therefore a concerted effort is made by different methodological approaches to relate courses to other disciplines, religions, and world views. Because of the essential openness of the Catholic tradition, the department includes insights from the Protestant and Jewish traditions.

Further, the Department of Theological Studies prepares Honour and Major students for professional and graduate studies through the following programs.

THEOLOGICAL STUDIES

301 **Hinduism. Full Course.** S.Wesolowsky

A survey of the major religious and philosophical writings of India, starting from the prehistoric and the Vedic period and continuing into Jainism and Buddhism. Emphasis will be given to the origins and development of Hinduism up to the present time.

Lectures: 3 hours per week for two terms.

306 **Theology of Judaism. Full Course.** M.Halpern

A survey of the influence of charismatic persons upon the development of Jewish thought and ideals, attitudes and practices. Jewish concepts of universalism, mortality, and human responsibility will be explored against the ever-evolving conditions of Jewish existence.

Lectures: 3 hours per week for two terms.

308 **Religious Experience In Contemporary Society. Full Course.** P.Jones

An investigation into some of the less orthodox paths taken by modern man in his search for religious experience: The Occult and its Appeal; Chemically-induced religious experience and its authenticity; the charismatic movement in traditional christianity; The appeal of the sects; Renewed interest in witchcraft and demonology; Spiritualism and the supernatural.

Lectures: 3 hours per week for two terms.

311 **Contemporary North American Judaism. Full Course.** L.Poller

Its historical, philosophical and theological developments with special consideration given to twentieth century patterns and problems.

Lectures: 3 hours per week for two terms.

313 **Theology of Hope. Full Course.** W.Bedard

This current development among Catholic and non-Catholic theologians will be studied in texts from Moltmann, Pannenberg and Metz. For "the futuristic humanism with which it carries on conversation," some collateral reading will be expected. Special attention will be given to the Christian-Marxist dialogue involving these theologians. The course will situate the new thinking in the context of biblical theology and evaluate its relevance for today, particularly with regard to a so-called theology of revolution.

Lectures: 3 hours per week for two terms.

THEOLOGICAL STUDIES

315 **Comparative Religions. Full Course.** G.O'Brien, S.J.

A consideration of the basic religious attitudes and postures of primitive man and of the nature and role of religion in his life. An attempt will be made to assess the contribution of the religion of primitive man to certain historical religions.

Lectures: 3 hours per week for two terms.

317 **Authority, Freedom and Anarchy. Full Course.** P.Richardson

An exploration of the meaning of freedom, not in the sense of freedom of choice nor of freedom of the will, but as a description of human existence. It attempts to uncover man's tendencies towards anarchy and authoritarianism as a part of his push for freedom. A part of the course will centre on Berdyaev's understanding of freedom, personality, creativity and spirituality.

Lectures: 3 hours per week for two terms.

324 **Psalms and Wisdom Literature. Full Course.** W.Browne, S.J.

The Psalms are studied chiefly from an historical point of view, but with the wider context of personal appropriation in mind, based on the New Testament appropriation.

The Wisdom Literature of the Bible, an example of Wisdom Literature in general, has much value to all peoples of all times. Particularly important will be the Book of Job, and the problem of suffering.

Lectures: 3 hours per week for two terms.

334A **Invitation to the Old Testament. Half Course. First Term.** P.Garnet

Literary analysis and historical background in the light of archaeological discovery and contemporary documents with the development of religious ideas.

Lectures: 3 hours per week, first term.

335B **Invitation to the New Testament. Half Course. Second Term.** P.Richardson

An introductory course, covering the emergence of Christianity out of Judaism, the literature of the New Testament, and the social patterns which developed, particularly in Christians' relationships to Jews and to the Hellenistic world. It includes studies both of the tensions arising in early Christianity and of the critical methods of examining the New Testament.

Lectures: 3 hours per week, second term.

THEOLOGICAL STUDIES

336B Ancient Near Eastern Religions. Half Course. Second Term. P.Garnet

MWF 19

The religions of ancient Mesopotamia, Egypt and the Levant during the bronze and early iron ages.

This material provides our best documented examples of the religions of early civilized man and constitutes invaluable background material for the study of the religion of the Old Testament.

Lectures: 3 hours per week, second term.

B417

339B Love and Hate. Half Course. Second Term. C.Paris

TF 30

A comparative study of two themes in their modern expression of literature and the visual arts and in the traditional Christian sources of Scripture History and Theology.

Lectures: 3 hours per week, second term.

Cancelled

344A Questions from the History of Early and Medieval Christianity. Half Course. First Term. P.Jones

MWF 12

A treatment of several questions arising from the growth of the western christian tradition which may shed light on the current situation of Christians. The 'Establishment' of Christianity in the Roman Empire; Augustine's views on society and man; Problems of a medieval 'Christian Society'; Attempts at Reform of ecclesiastical structures.

Lectures: 3 hours per week, first term.

345B Questions from the History of Reformation and Post-Reformation Christianity. Half Course. First Term. P.Jones

MWF 12

A treatment of questions arising from the division of western christianity in the Reformation and its effects on society; Martin Luther and the new relationship between Church and State; Calvin and the rise of Capitalism; The Catholic Reform; Science and its impact on Religion; Modern critique of christianity.

Lectures: 3 hours per week, second term.

D127

346 Russian Religious Humanism. Full Course. P.Moroziuk

MWF 1

Readings from Russia's three greatest humanists: F.Dostoevsky, L. Tolstoy, N. Berdyaev. The course will study their analyses of the human consciousness with the intent of determining the means by which it strives to attain the ultimate goal of all human aspiration - freedom. According to Dostoevsky consciousness attempts to achieve this goal through the divinization process. Tolstoy thinks this is done via the channel of christian love. While Berdyaev contends that freedom is achieved through creativity (Creative personality).

Lectures: 3 hours per week for two terms.

THEOLOGICAL STUDIES

355 Science and Religion. Full Course. S.Wesolowsky

MWF 1

A study of some of the representative classic and contemporary formulations of the conflict between science and religion. This course will examine both the types and the bases of various claims made in the areas of science and religion.

Lectures: 3 hours per week for two terms.

361 Word, Event and Interpretation. Full Course. P.Richardson

MWF 11

The goal of the course is to work towards a comprehensive approach to the understanding of the Bible. To do so, problems of human language, myth and symbol, historical event, philosophy of history and hermeneutics (the interpretation of one kind of material in a different social and cultural context) will be discussed in a preliminary way. The course works towards a developmental approach to the Bible.

Lectures: 3 hours per week for two terms.

A314

362 Christian Ethics. Full Course. J.Hofbeck

TT 1

Through an analysis of the main present-day moral problems, and in confrontation with non-christian and non-religious interpretations, we intend to elaborate the specificity of Christian ethics. Particular attention will be given to the necessary changes within any moral system.

Lectures: 3 hours per week for two terms.

363 Images of the Church in the New Testament. Full Course. W.Browne

TT 1

The first step to understand what the nature of the Church is, is to examine what Christ, Paul, John and the others said about it in images. This approach has in its favor that the intellect feeds on the images provided by the imagination and insight depends upon this activity of the mind. There is a further advantage, namely, that the images of the New are found in the Old Testament so that the student becomes fairly familiar with much Biblical imagery and thus should acquire a better sense of Salvation History.

Lectures: 3 hours per week for two terms.

364 Les Origines du Christianisme Canadien. Full Course. C.Paris

MWF 2

- une étude historique des personnages, la pensée religieuse et l'atmosphère sociale à la période de la fondation du christianisme canadien. Une étude qui aura le souci de voir les problèmes sociaux et religieux d'aujourd'hui dans la lumière de ces origines.

Lectures: 3 hours per week for two terms.

365 Challenges of Catholicism in the Province of Quebec. Full Course. J.HofbeckMWF 10

Because of its radical changes within one generation, and because of the exceptional variety of challenges from different life-styles, culture forms, world views and religions, the Quebec Catholicism is one of the most interesting phenomena in the Catholic Church today. This course intends to analyse this situation from a genuine theological point of view.

Lectures: 3 hours per week for two terms.

367 Christianity and Culture. Full Course. A.WebsterMWF at 11

The analysis of the historical and cultural background within which Judaeo-Christian order of meaning emerges and develops. This course will explore the foundations and evolution of Christianity and Western Civilization.

Lectures: 3 hours per week for two terms.

371 Psychology and Religion. Full Course. M.SpicerMWF 12

An interdisciplinary course, entailing:

- the intellectual background to and analysis of Freud and Jung in relation to contemporary social dynamics and symbolics;
- a survey of neo-freudian social psychologists such as Karen Horney and Harry Stack Sullivan;
- a survey of gestalt depth psychologists such as Rogers, Maslow and May.

The course will explore not only various theories of developmental psychology, but also social psychoanalytic theories of contemporary society in relation to such topics as anxiety, ethical creative persons, necrophilia, religion as illusion, the future possibility of society rooted in creative imagination.

Lectures: 3 hours per week for two terms.

375 Marriage. Full Course. C.ParisMWF 12

A study of the phenomena that express man's need for love and union. Marriage has traditionally been the most common symbol of this love and union answering a psychological, social and religious need. Questions are being asked concerning the necessity and permanence of marriage as a civil or religious institution; the course will concern itself with discussion of the problems raised.

Lectures: 3 hours per week for two terms.

383 Introduction to Systematic Theology. Full Course. C.HenkeyMWF at 9

Things are meaningful only in the context of the whole. As our personal existence is not a solitary status, but is a co-existence, relatedness, its fulfillment could not be impersonal. It has to be a dialogical self-realization towards somebody else, ultimately towards an absolute person. It is the challenge of systematic theology to elaborate the context for, and to study the overall structure of this dialogical existence. The latter is the horizon in which the existence of man and his world obtains an intelligent and positive meaning.

Lectures: 3 hours per week for two terms.

385 Issues in Christian Anthropology. Full Course. S.WesolowskyMWF 10

An interdisciplinary course, dealing with both anthropological and theological material, which will be a study of a number of structures of human existence and their interrelations, not only in their individual aspects, but also in their social and historical dimensions. The play, work, sexual and political elements of man's existence will be emphasized.

Lectures: 3 hours per week for two terms.

406 Theology - Art and Science. Full Course. M.SpicerMWF 9

An interdisciplinary seminar, concerning the theopoetic, imaginative and interrelated aspects of science and art in a technological cybernetic, social political and psychotherapeutic questioning society. The pervading question will be, what is the place of the mytho-poetic function of man in relation to the future possibilities of contemporary society? Topics will include the psychic infection of society by liberal ideologies and mass myths, art and science, politics of space and electric projection, cybernetics and art, visual communication, the artistic vision and scientific research, the social imagination, creative possibilities of art re the uniqueness of the human individual in society.

Lectures: 3 hours per week for two terms.

419 Theology of Symbolism. Full Course. W.Browne, S.J.TT 10³⁰

Symbols lead us to thinking about the mysteries of life, our relationship with the Infinite and with our fellow man. The Liturgy is rich with symbolism that need examination and explanation. The student will be introduced to the main fields of the arts. Music, dance, painting, architecture and other areas of interest.

Lectures: 3 hours per week for two terms.

421 Political Theology. Full Course. A.WebsterT-T 9

A study of the historical reciprocity between political structures and the theological expressions of man's social and political existence.

Lectures: 3 hours per week for two terms.

B415

424 The Theology of St. Paul. Full Course.**W. Bedard**

TT 10³⁰
The historical background, particularly as revealed in the Acts of the Apostles, will be used to show how Paul's theology, while rooted in revelation, developed from actual situations. The present-day relevance of Paul's thought will be considered in terms of religious experience and social change.

Lectures: 3 hours per week for two terms.

428 Seminar on Teilhard de Chardin. Full Course.**C. Henkey**

MWF 3
T+9
I. A research into Teilhard's evolutionary worldview which on the one hand is built upon the phenomenological observations of the scientist and on the other on the mystical experience of the cosmic Christ.

II. Special investigation of controversial problems raised by Teilhard's writings as "the omega point", the problem of evil, the cosmic function of the eucharist, etc.

Lectures: 3 hours per week for two terms.

429 Biblical Soteriology. Full Course.**P. Garnet**

MWF 12
Salvation, life with God, after-life doctrine, righteousness, law, sin, punishment, holiness, uncleanness, sacrifice, atonement, forgiveness and grace in the biblical period, including the inter-testamental literature (Dead Sea Scrolls, apocrypha, and Pseudepigrapha of the Old Testament).

Lectures: 3 hours per week for two terms.

434 Marxist-Leninist Critique of Religion. Full Course.**P. Moroziuk**

TT 1
This course consists of a brief study of the historical and especially the philosophical (Historical and Dialectical Materialism, Theories of Alienation and Practice) background to the Marxist-Leninist critique of religion. The critique consists in Scientific Atheism: negatively, the negation of God; positively, the affirmation of man. Further the study will lead us to the marxist-leninist concept of religion, of the new (atheistic) communist man, of the eschatological vision and the indictment of religion, especially, of Christianity. We shall consider the contradictions and the acceptable and unacceptable elements of the critique. Finally, what is the nature of psychological commitment and effective life of an atheist?

Lectures: 3 hours per week for two terms.

444 Seminar in Contemporary Mass Media and Revelation. Full Course.**J. Hofbeck**

MW 1
W 3
The most fundamental problems of man will be explored through a systematic encounter of contemporary mass media and revelation. The approach will be mainly creative with individual and group projects. This encounter should lead to a more explicit awareness of various levels of meaning to be found in contemporary mass media.

Lectures: 3 hours per week for two terms.

453 Theology and Literature. Full Course.**G. O'Brien, S.J.**

TT 2³⁰
Individual or group investigation into the theological dimensions of the human problems facing man as seen in the context of modern literature.

Lectures: 3 hours per week for two terms.

500 Honours Theology Tutorial.

MWF 5
Required of honours Theology students and open to majors as well. At the end of the second year, students must choose, in consultation with their tutorial director, a research topic or other specialized work for an intense analysis during their final year. The aim of this course is an individually directed preparation for the comprehensive examination. Tutorial directors, at their discretion, may assign summer reading as part of the course work. Further, the major portion of the comprehensive examination will be devoted to the area upon which the student has concentrated.

501 Seminar on the Political Atheism of Marxism-Leninism. (Confer Political Science 402)**P. Moroziuk**

TT 10³⁰
A brief period of the seminar will be spent on studying the basic tenets of Marxism-Leninism (Historicism, Kiamat, Scientific Atheism, Political Economy and Scientific Socialism). The remainder will focus on examining the role Marxism-Leninism plays in determining communist ideology and political praxis on both the internal (national) and international levels. Also, each student will undertake a research project centered either around the national political scene or the international scene with the purpose of illustrating the determinant role of Marxism-Leninism in each case study.

Texts: *Fundamentals of Marxism-Leninism, Moscow 1963.*

Research: from current periodicals concerned with the Soviet scene.



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June 30, 1972
 June 30, 1971
 June 30, 1973
 June 30, 1971
 June 30, 1971
 June 30, 1971
 June 30, 1973
 June 30, 1972
 June 30, 1971

June 30, 1971
 June 30, 1971

June 30, 1972

June 30, 1972
 June 30, 1971
 June 30, 1971
 June 30, 1973
 June 30, 1973

*Committees
of
Senate*

These committees are set up by the Nominating Committee of Senate which is composed of the Academic Vice-President, who is Chairman, and four Senators, one from each faculty. The members of these committees are chosen from the student body, faculty and administration and Senate then approves the final composition of the committees. Anyone wishing to be a member of one of these Senate committees should contact the Academic Vice-President. The following are standing committees of Senate:

Committee of Academic Standing.
Committee on Admissions
Library Board
Scholarship Committee
Student Life Committee
Budget Committee
Sub-committee on the Scheduling of Lectures and Examinations
Committee on Prospectus
Committee on Visiting Lecturers, Special Speakers etc.
Evening Division Committee
Sub-Committee on Graduate Awards and Programs
Curriculum Committee

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J.C. Burke, B.A., M.A., Ph.D.,

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To be Announced.

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Major J.P. Hale

Chief Librarian

G. Trowsdale, B.A., (Lib. Sc.) Lib. Cert.

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A. Powell, M.D.
Nurse
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Associate Professor, Accountancy; Dean of Commerce.

BOYLE, L.J., B.A. (Montreal), B. Comm. (Montreal), M.A. (McGill).
Assistant Professor, Chairman of Accountancy and Business Administration.

DAUDERIS, H., B. Comm. (Montreal), C.A.
Assistant Professor, Accountancy.

GREENSPON, H.S., B. Comm. (McGill), C.A.
Lecturer, Accountancy.

MacDONALD, D.F., B. Comm. (Sir George Williams), C.A.
Associate Professor, Accountancy.

McGRAW, R.L., B.Comm. (McGill), L.A. (McGill), C.A.
Assistant Professor, Accountancy.

VASILKIOTI, A., B. Comm. (McGill), L.A. (McGill), C.A.
Assistant Professor, Accountancy.

Biology

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OLD PROGRAMMES

The Fourth Year Programmes outlined on the following pages are for those students in their final University year of the pre-CEGEP system.

THE BACHELOR OF ARTS PROGRAMMES

HONOURS				
YEAR	CLASSICS	ECONOMICS	ENGLISH	FRENCH
FIRST	DISCONTINUED			
SECOND*	Greek Latin (2) French Philosophy Elective	Economics 260 Economics 271 French Philosophy Theology Elective	Classics or English 680 or 590 English (the equiv- alent of two full courses from 610, 613, 620, 633, 643, 653, 673, 674) Philosophy Electives (2)	French 232 French (the equiv- alent of one full course from the list of Honours and Majors courses, except 428, 432, 434, 440) Philosophy Theology Electives (2)
THIRD*	Greek (2) Latin Ancient History Philosophy Theology	Economics 354 Economics 366 Econ. Elective Philosophy Theology	English (the equiv- alent of three full courses from the list of Honours and Major courses) Philosophy Elective	French (the equiv- alent of four full courses from the list of Honours and Major courses) Philosophy
FOURTH	Greek Honours Tutorial Latin Honours Tutorial Prose Composition Theology Elective	Economics 561 or 564 or 580 Econ. Electives (2) Electives (2)	English (the equiv- alent of three full courses from the list of Honours and Major courses Theology Elective	French 428 (if not yet taken)** French (the equiv- alent of two full courses from the list of Honours and Majors courses) French 500 Theology

*Not offered 1971-72.

**Students registering for their final year in French must select their courses in consultation with the Chairman of the Department in order to fulfill all requirements for a B.A.

THE BACHELOR OF ARTS PROGRAMMES

HONOURS				
YEAR	HISTORY	PHILOSOPHY	POLITICAL SCIENCE	THEOLOGY
FIRST	DISCONTINUED			
SECOND*	History (three Electives from General courses) Philosophy Theology	Classics 112 or 202 or 212 or 221 Language Philosophy 200 History of Phil. Theology Elective	Economics 100 Philosophy Poli. Sci. 500 Poli. Sci. 595H Theology Elective	Classics 112 or 202 or 212 or 221 French Philosophy Theology Electives (3)
THIRD*	Honours History Tutorial History (two Electives from Honours courses) Philosophy Elective	History of Phil. Philosophy Seminar Philosophy Elective Theology Elective	Philosophy Poli. Sci. Electives (3) Elective	Philosophy Social Science Theology Electives (3)
FOURTH	Honours History Tutorial History (two Electives from Honours courses) Theology Elective	History of Phil. Philosophy Seminar Philosophy Electives (2) Elective	Poli. Sci. 590 Poli. Sci. Electives (3) Theology	Philosophy Theology Electives (3) Elective

*Not offered 1971-72.

THE BACHELOR OF ARTS PROGRAMMES				
MAJORS				
YEAR	CLASSICS	COMMUNICATION ARTS	ECONOMICS	ENGLISH
FIRST	DISCONTINUED			
SECOND*	Classics (2) English French Philosophy Theology	Classics Comm. Arts 200- 205 English French Philosophy Elective Theology	Classics 112 or 202 or 212 or 221 Economics 210 Economics 221 or 202 French Philosophy Theology	Classics English (the equiv- alent of two full courses from 610, 613, 620, 633, 643, 653, 673, 674) French Philosophy Elective
THIRD*	Classics (3) Theology Electives (2)	Comm. Arts. Electives (3) Philosophy Elective	Economics 304 Economics 306 English Philosophy Theology	English (the equiv- alent of two full courses from the list of Honours and Majors courses) Philosophy Electives (2)
FOURTH	Classics (2) Philosophy Electives (2)	Comm. Arts Electives (3) Theology 444 or Comm. Arts 450 Elective	Econ. Electives (3) Electives (2)	English (the equiv- alent of two full courses from the list of Honours and Majors courses) Theology Electives (2)

*Not offered 1971-72.

THE BACHELOR OF ARTS PROGRAMMES					
MAJORS					
YEAR	FRENCH	GERMAN	HISTORY	ITALIAN	MODERN LANGUAGES
FIRST	DISCONTINUED				
SECOND*	Classics English French 232 French (the equiv- alent of one full course from the Honours and Majors courses, except 428, 432, 434, 440) Philosophy Theology	Classics 112 or 202 or 212 or 221 English French 220, 224, 228, 230-240, 250 or 260 German 200 Philosophy Theology or Elective	Classics 112 or 202 or 212 or 221 French History (two Electives from General courses) Philosophy Theology	Classics 112 or 202 or 212 or 221 English French 220, 224, 228, 230-240, 250 or 260 Italian 200 Philosophy Theology or Elective	English French 224, 228, 230-240, 250 or 260 History Mod. Lang. (two Electives from: German 200, Italian 200, or Spanish 200) Philosophy
THIRD*	French (the equiv- alent of two full courses from the Honours or Majors courses) Philosophy Electives (2)	German (two Electives from 300s, 400s, 500s) Philosophy Theology Elective	English History (two Electives from General or Honours courses) Philosophy Elective	Italian (two Electives from 300s, 400s, 500s) Philosophy Theology Elective	Mod. Lang. (three Electives from the 300s in German, Italian, or Spanish) Philosophy Theology
FOURTH	French (the equiv- alent of three full courses from the Honours and Majors courses; French 428 is strongly recommended)** Theology Elective	German (three Electives from 300s, 400s, 500s) Theology Elective	History (two Electives from General or Honours courses) Theology Electives (2)	Italian (three Electives from 300s, 400s, 500s) Theology Elective	Mod. Lang. (two Electives from the 300s or 400s in German, Italian or Spanish) Theology Elective in one of the two major Modern Languages

*Not offered 1971-72.

**Students registering for their final year in French must select their courses in consultation with the Chairman of the Department in order to fulfill all requirements for a B.A.

OLD PROGRAMS

THE BACHELOR OF ARTS PROGRAMMES				
MAJORS				
YEAR	PHILOSOPHY	POLITICAL SCIENCE	PSYCHOLOGY	SOCIOLOGY
FIRST	DISCONTINUED			
SECOND*	Classics 112 or 202 or 212 or 221 English French History of Phil. Philosophy 200 Theology	Classics 112 or 202 or 212 or 221 English French Philosophy 200 Poli. Sci. 500 Theology	Classics 112 or 202 or 212 or 221 French Philosophy Psychology 201 Statistics 202 Theology	Classics English French Sociology 200 Sociology 201 or 203 or 205 Sociology 202 or 204 or 206
THIRD*	History of Phil. Philosophy Seminar Theology Electives (2)	Philosophy Poli. Sci. Electives (3) Elective	Psychology 305 Theology Electives (3)	Philosophy Sociology 300 Sociology 350 Sociology Elective Elective Theology
FOURTH	History of Phil. Philosophy Seminar Electives (3)	Poli. Sci. Electives (3) Theology Elective	English Philosophy Electives (3)	Philosophy Sociology 500 Electives (3)

*Not offered 1971-72.

THE BACHELOR OF ARTS PROGRAMMES					
MAJORS			JOINT MAJORS		
YEAR	SPANISH	THEOLOGY	POLITICAL SCIENCE AND ECONOMICS	MODERN LANGUAGES AND ECONOMICS	MODERN LANGUAGES AND FRENCH
FIRST	DISCONTINUED				
SECOND*	Classics 112 or 202 or 212 or 221 English French 220, 224, 228, 230-240, 250 or 260 Philosophy Spanish 200 Theology or Elective	Classics 112 or 202 or 212 or 221 English French Philosophy Theology Electives (2)	Classics Economics 210 Economics 221 or Elective French Political Science Philosophy	Not offered 1970-71	Not offered 1970-71
THIRD*	Philosophy Spanish (two Electives from 300s, 400s, 500s) Theology Elective	Philosophy Social Science Electives (2) Theology Electives (2)	Economics English Political Science Theology	Economics (2) Language (1) Philosophy Theology	Philosophy Theology French (2) from the List of Honours – Major Courses Language (2)
FOURTH	Spanish (three Electives from 300s, 400s, 500s) Theology Elective	Philosophy (2) Social Science Elective Theology Electives (2)	Economics Political Science (2) Philosophy Theology	Economics (1) Language (2) Philosophy Theology	Theology French (2) from the List of Honours – Major Courses ** Language (2)

*Not offered 1971-72.

**Students registering for their final year in French must select their courses in consultation with the Chairman of the Department in order to fulfill all requirements for a B.A.

OLD PROGRAMS

THE BACHELOR OF COMMERCE PROGRAMMES				
MAJORS				HONOURS
YEAR	ACCOUNTANCY	BUSINESS ADMINISTRATION	ECONOMICS	ECONOMICS
FIRST	DISCONTINUED			
SECOND*	Accounting 205 Business 204-215 Business 207 French Philosophy Theology	Accounting 205 Business 204-215 Business 207 French Philosophy Theology	Accounting 205 Economics 210 Economics 221 or 202 French Philosophy Elective	Economics 260 Economics 271 French Philosophy Electives (2)
THIRD*	Accounting 306 Business 301 Business 308 English Elective	Business 301 Business 306 Business 308 Business 320 English	Economics 354 Economics 306 English Philosophy Theology	Economics 304 Economics 366 Economics Elective Philosophy Theology
FOURTH	Accounting 503A- 505B Accounting 508 Business 502 Philosophy Theology Elective	Business Elective Philosophy Theology Electives (3)	Economics Electives (3) Electives (2)	Economics 561 or 564 or 580 Economics Electives (2) Electives (2)

*Not offered 1971-72.

THE BACHELOR OF SCIENCE PROGRAMMES			
HONOURS			
YEAR	CHEMISTRY	MATHEMATICS	PHYSICS
FIRST	DISCONTINUED		
SECOND*	Chemistry 211 Chemistry 212 Chemistry 221 Chemistry 222 Chemistry 231 Mathematics 232 Philosophy Theology	Mathematics 220 Mathematics 231 Mathematics 201 or 240 Mathematics 234 Philosophy Physics 205	Mathematics 231 Mathematics 234 Philosophy Physics 205 Physics 220 Physics 301 Physics 309
THIRD*	Chemistry 313 Chemistry 323 Chemistry 324 Chemistry 332 Chemistry 333 Chemistry 334 English Mathematics 332 Philosophy Physics 205 (Theory)	Mathematics 320 Mathematics 321 Mathematics 330 Philosophy Physics 311 Theology	Philosophy Physics 306 Physics 307 Physics 310 Physics 320 Physics 304 Physics 305 Theology
FOURTH	Chemistry 425 Chemistry 426 Chemistry 435 Chemistry 436 Chemistry 437 Chemistry 450 Philosophy or Theology	English Mathematics 536 Mathematics 560 Mathematics 591 One or two from: Mathematics 401, 520, 540, 571, 573, 580 Philosophy or Theology	English Physics 403 Physics 404 Physics 408 Physics 411 Physics 410 Philosophy or Theology

*Not offered 1971-72

THE BACHELOR OF SCIENCE PROGRAMMES			
MAJORS			
YEAR	BIOLOGY-CHEMISTRY	CHEMISTRY	GEOLOGY
FIRST	DISCONTINUED		
SECOND*	Biology 202 Chemistry 212 Chemistry 221 Chemistry 222 Chemistry 231 Philosophy Theology	Chemistry 212 Chemistry 221 Chemistry 222 Chemistry 231 Mathematics 232 Philosophy Theology	Chemistry 211 Chemistry 212 Geology 203 Geology 205 Geology 206 Geology 207 Geology 208 Geology 209 Mathematics 202 Philosophy Theology
THIRD*	Biology 304 Biology 305 Chemistry 323 Chemistry 324 Mathematics 202 Philosophy	Chemistry 211 Chemistry 313 Chemistry 323 Chemistry 324 Chemistry 334 English	Chemistry 231 Engineering 802 Geology 301 Geology 302 Geology 303 Geology 304 Geology 305 Geology 306 Philosophy Physics 206
FOURTH	Biology 406 Biology 408 English Philosophy or Theology Two Electives	Chemistry 332 Chemistry 333 Chemistry 425 Chemistry 426 Philosophy or Theology	Geology 502 Geology 512 Geology 521 Geology 523 Geology 531 Geology 552 Philosophy or Theology English

*Not offered 1971-72.

OLD PROGRAMS

THE BACHELOR OF SCIENCE PROGRAMMES			
MAJORS			
YEAR	MATHEMATICS	PHYSICS	PSYCHOLOGY
FIRST	DISCONTINUED		
SECOND*	Mathematics 221 Mathematics 232 One from: Mathematics 201 Mathematics 240 Philosophy Physics 205 Theology	Mathematics 231 Mathematics 234 Philosophy Physics 205 Physics 220 Physics 301 Physics 309	Statistics 202 Chemistry 221 Chemistry 222 English Philosophy Psychology 201 Theology
THIRD*	Mathematics 234 Mathematics 331 Mathematics 320 Philosophy Physics 311	Philosophy Physics 302 Physics 304 Physics 307 Physics 320 Theology	Biology 331 Philosophy Psychology 305 Two Electives
FOURTH	English Mathematics 326 Mathematics 336 Mathematics 591 One from: Mathematics 401, 540, 560, 571-573, 580 Philosophy or Theology	English Physics 306 Physics 310 Physics 403 Philosophy or Theology	Philosophy or Theology Psychology 401 Three Electives

*Not offered 1971-72.

OLD PROGRAMS

THE BACHELOR OF SCIENCE PROGRAMMES				
GENERAL				
YEAR	CHEMISTRY	GEOLOGY	MATHEMATICS	PHYSICS
FIRST	DISCONTINUED			
SECOND*	Chemistry 212 Chemistry 221 Mathematics 232 Philosophy Theology	Chemistry 211 Chemistry 212 Geology 203 Geology 205 Geology 208 Geology 209 Mathematics 202 Philosophy Theology	Mathematics 221 Mathematics 232 Philosophy Theology One Elective	Mathematics 232 Philosophy Physics 201 Physics 205 One Elective from: Biology Chemistry 231 Geology
THIRD*	Chemistry 231 Chemistry 222 Chemistry 314 English Philosophy One Elective	Chemistry 231 Geology 301 Geology 302 Geology 303 Geology 403 Philosophy Sc. Elective (1)	English Mathematics 201 Mathematics 234 Mathematics 240 Philosophy	Philosophy Physics 307 Physics 311 Sc. Elective (1) Theology
FOURTH	Chemistry 313 Chemistry 324 Philosophy or Theology One Elective	English Geology 512 and either (a), (b) or (c) (a) Geology 552 Sc. Elective (1) (b) Geology 413 Geology 527 Sc. Elective (1) (c) Geology 331 Geology 431 Geology 531 Philosophy or Theology	Mathematics 324 Mathematics 334 Philosophy or Theology One Elective	English Philosophy or Theology Physics 302 Physics 304 Sc. Elective (2)

*Not offered 1971-72.

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